

LEADING CAUSES  
OF MORTALITY

1989

C614.1  
N87v5  
1989  
c. 2

THE LIBRARY OF THE  
UNIVERSITY OF  
NORTH CAROLINA  
AT CHAPEL HILL



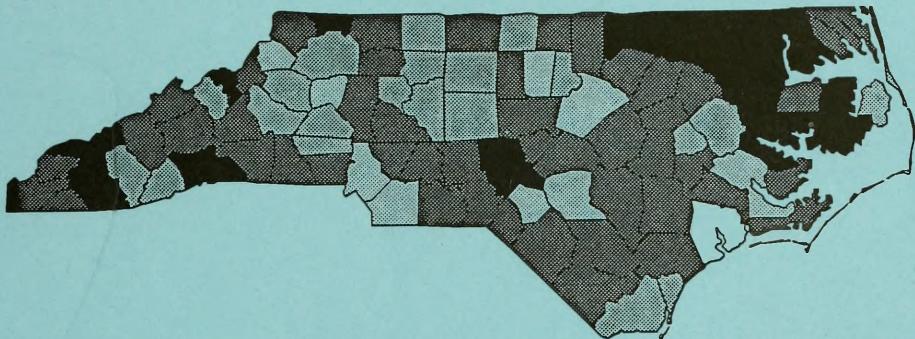
THE COLLECTION OF  
NORTH CAROLINIANA

---

C614.1  
N87v5  
1989  
c. 2

C614.1  
N87V5  
1989  
C.2

# LEADING CAUSES OF MORTALITY



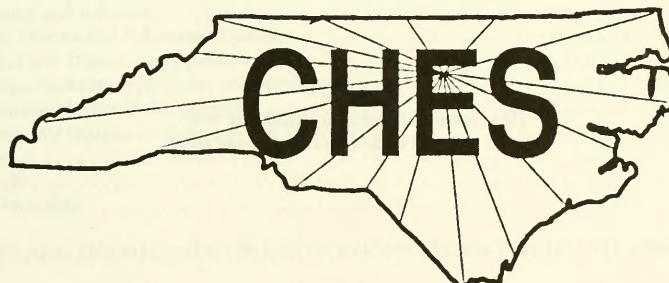
N.C. COLLECTION  
Wilson Library  
UNC - Chapel Hill  
APR 10 1991  
52065  
N. C. DEPOSITORY  
State Document

**North Carolina  
Vital Statistics  
1989—Volume 2**



# **LEADING CAUSES OF MORTALITY**

**North Carolina  
Vital Statistics  
1989—Volume 2**



**Center for Health and Environmental Statistics**  
Division of Statistics and Information Services  
N.C. Department of Environment, Health, and Natural Resources

**STATE OF NORTH CAROLINA**

James G. Martin, Governor

**DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES**

William W. Cobey, Jr., Secretary

**DIVISION OF STATISTICS AND INFORMATION SERVICES**

Delton Atkinson, M.S.P.H., M.P.H., Director

February 1991

700 copies of this public document were  
printed at a cost of \$445.71 or 64¢ per copy.

## TABLE OF CONTENTS

	<u>Page</u>
FIGURE 1—Department of Environment, Health, and Natural Resources Regions .....	iv
PREFACE .....	v
I. COMPUTATION OF MORTALITY RATES .....	1-1
II. INTERPRETATION OF MORTALITY RATES .....	2-1
III. FLAGGING BIASED RATES .....	2-1
IV. NORTH CAROLINA MORTALITY HIGHLIGHTS .....	4-1
V. TABLES AND FIGURES: MORTALITY STATISTICS FOR 1985-89	
Total Deaths .....	5-3
Diseases of the Heart .....	5-6
Cerebrovascular Disease .....	5-9
Atherosclerosis .....	5-12
Cancer .....	5-14
Cancer of Colon, Rectum, and Anus .....	5-17
Cancer of Trachea, Bronchus, and Lung .....	5-20
Cancer of Female Breast .....	5-23
Cancer of Prostate .....	5-26
Septicemia .....	5-29
Diabetes Mellitus .....	5-31
Pneumonia and Influenza .....	5-33
Chronic Obstructive Pulmonary Disease .....	5-36
Chronic Liver Disease and Cirrhosis .....	5-39
Nephritis, Nephrotic Syndrome, and Nephrosis .....	5-42
Unintentional Motor Vehicle Injuries .....	5-44
Unintentional Injuries Excluding Motor Vehicle .....	5-47
Suicide .....	5-50
Homicide .....	5-53
Infant Mortality .....	5-56
VI. TABLES AND FIGURES: MULTIPLE CONDITIONS PRESENT AT DEATH, 1985-89	
VII. REFERENCES	

# NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES REGIONS

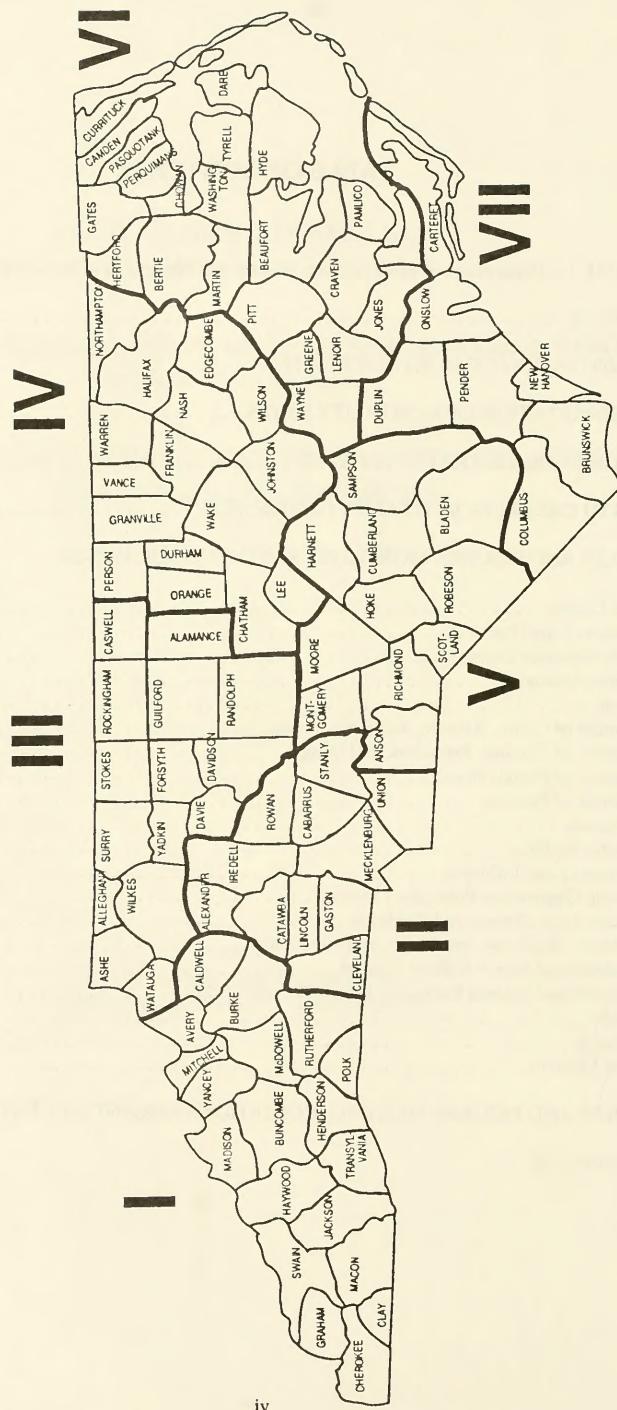


FIGURE 1

## PREFACE

The Center for Health and Environmental Statistics periodically produces a major publication describing North Carolina's mortality experience for a five-year period. The 1988 *Leading Causes of Mortality*, the fourth major publication of this type, included statistical tables, maps, and graphs, as well as an analysis for each leading cause of death in North Carolina. In the interim years, the Center publishes supportive reports of mapped and tabular data only.

This edition of *Leading Causes of Mortality* is a supportive report which should be used in conjunction with the 1988 edition for purposes of health planning and analysis. Another report that can be used is *Detailed Mortality Statistics* which provides annual counts of deaths classified according to detailed underlying causes of death and the age, race, and sex of decedents.

The tables and maps in this report show selected mortality statistics for counties, Department of Environment, Health, and Natural Resources regions, and the state (see map on preceding page). More than a dozen of North Carolina's leading causes of mortality are depicted in these tables and maps. In addition, major site-specific cancers and total infant mortality are also tabled and mapped. Table 1, on page 4-3, describes the selected cause-of-death categories in terms of codes from the *International Classification of Diseases* (Ninth Revision). Altogether, the causes included in this report accounted for 85 percent of all North Carolina deaths during 1989.

As with previous editions, multiple conditions present at death are included in this volume. Five diseases in particular—septicemia, diabetes mellitus, hypertension, atherosclerosis, and nephritis/nephrotic syndrome/nephrosis—are considered associated conditions far more often than they are considered an underlying cause. Hence, Figures 18.A through 22.B display 1985-89 county rates for deaths associated with a mention of each of these diseases. Meanwhile, rates corresponding to these diseases as underlying causes are tabulated but not mapped in this volume.

IN USING THIS VOLUME PLEASE NOTE THE SECTIONS ON INTERPRETATION OF MORTALITY RATES AND FLAGGING BIASED RATES.



## I. COMPUTATION OF MORTALITY RATES

In this report, total death rates are expressed as resident deaths per 1,000 population, while all cause-specific mortality rates are expressed as resident deaths per 100,000 population. All rates in Tables 1-21 use total population in the denominator, except rates for the sex-specific cancer sites, which use male or female population in the denominator. The infant mortality rates of Table 21 and Figure 17 are computed as the number of resident deaths under one year of age per 1,000 resident live births. Population bases for the rates of this report were provided by the Office of State Budget and Management in the Governor's Office.

Vital events in this report are allocated to place of residence. For deaths of inmates of long-term institutions (mental, penal, old age, orphan, nursing home, rest home, etc.), the institution is considered the usual residence provided the decedent had resided in the institution at least one year. College students and military personnel are considered residents of the college or military community.

The following definitions apply to the rates of this report:

**Unadjusted Annual Death Rate:** the annual death rate computed as resident deaths per 1,000 or 100,000 population. These rates permit the user knowledge of an area's status with respect to the observed incidence of mortality during the given year.

**Unadjusted 5-Year Death Rate:** the average annual death rate computed as average resident deaths per 1,000 or 100,000 average population. These rates permit the user knowledge of an area's status with respect to the observed incidence of mortality during the five-year period. These rates are depicted in the Series A maps (e.g., Figures 2.A, 3.A, etc.).

**Adjusted 5-Year Death Rate:** the average annual age-race-sex-adjusted rates computed by the direct method. Also expressed as deaths per 1,000 or 100,000 population, these rates are those which **would be expected** if the average annual age, race, and sex composition of each county's population were the same as that estimated for the state. These rates are free of differing effects of age, race, and sex and thus permit the user knowledge of an area's status with respect to other determinants of mortality during the five-year period. However, the user should not compare an adjusted death rate to an unadjusted death rate. Also, adjusted rates for different time periods cannot be directly compared unless they were adjusted by the same standard population. The adjusted rates are depicted in the Series B maps (e.g., Figures 2.B., 3.B., etc.). [Note: For the two sex-specific cancer sites (female breast and prostate), rates are adjusted for age and race, and denominators are sex-specific.]

For the maps, a clustering routine\* from the Statistical Analysis System (SAS) was used to group counties that are "most like each other" with respect to their unadjusted rate and then their adjusted rate (1). These maps show five levels of death rates, where level one is the lowest rate interval and level five the highest.

\*In 1983 the Center for Health and Environmental Statistics conducted an evaluation of several clustering methods. It was found that the "Average Linkage Method" produced tighter clusters (i.e., clusters with smaller within-cluster variances) than the other methods examined. Consequently, this method is used to cluster county rates in all CHES publications.



## II. INTERPRETATION OF MORTALITY RATES

To assess an area's relative mortality conditions during a five-year period, both the unadjusted rate and the adjusted rate can be compared to the state rate for a particular cause of death. One would not do this, of course, if the area's unadjusted rate had fluctuated widely in recent years; that is, the rate should represent a relatively stable situation. Then, the following alternative interpretations will apply:

Relative Status Of		Interpretation of Unadjusted Rate
Unadjusted Rate	Adjusted Rate	
Low	Low	Low mortality is not due to age, race, and sex factors; other mortality conditions are favorable.
Low	High	Low mortality is due to favorable age, race, and sex factors; other mortality conditions are unfavorable.
High	Low	High mortality is due to unfavorable age, race, and sex factors; other mortality conditions are favorable.
High	High	High mortality is not due to age, race, and sex factors; other mortality conditions are unfavorable.

In using adjusted rates, it is important that the user understand the reason for adjustment. Example: A and B stand for population subgroups, e.g., whites and nonwhites, males and females, etc.

	County			State		
	Population	Deaths	Death Rate*	Population	Deaths	Death Rate*
Population A	300,000	1,000	333.3	500,000	2,500	500.0
Population B	10,000	10	100.0	800,000	1,000	125.0
Total	310,000	1,010	325.8	1,300,000	3,500	269.2

\*Deaths per 100,000 population.

Compared to the state, county subgroups A and B both have lower rates, but the county as a whole (A and B combined) has a higher rate. This seemingly paradoxical situation results from two factors: different proportions of A and B in the county vs. the state population and wide differences between the rates for A vs. B. In this example, it is true that the county has the higher total rate—BUT ONLY BECAUSE THE POPULATION CONTAINS A HIGH PROPORTION OF SUBGROUP A.

Certainly, it is important for program planners to know that the county has a high rate relative to the state rate; this information is needed in determining manpower, facility, and related needs. But in assessing "risk," the researcher needs to adjust for confounding factors such as age or race. To do this, one multiplies each population-specific county rate by the corresponding "standard" population, sums these results, and divides by the total "standard." In the above example, using the state population as the standard, the computation is:

$$\frac{(1000/300,000 \times 500,000) + (10/10,000 \times 800,000)}{1,300,000} = 0.001897 \text{ or } 189.7 \text{ per 100,000 population}$$

Thus, as rates specific for A and B imply, the county's rate is lower than the state's rate after adjustment for the factor represented by A and B.

### Caution!

In assessing the relative mortality conditions of a county, one should be particularly aware of rates based on small numbers of deaths since, in such cases, random fluctuation in the rate may render rate comparisons risky. The reader should read very carefully the next section entitled "Flagging Biased Rates."

### III. FLAGGING BIASED RATES

The age-race-sex-adjusted rates in this publication that have been determined to be biased are flagged with an asterisk (\*) to suggest caution in their use. A complete description of the rationale and method for flagging biased rates can be found in the 1988 *Leading Causes of Mortality*. A short summary is provided below.

Any rate with a small number of events (deaths) in the numerator will have substantial random variability over time, or a large standard error. A useful rule of thumb is that any rate based on fewer than 20 events in the numerator may involve serious random error and should be used very cautiously in making comparisons or assessing trends (2). Many of the rates in this volume do have numerators smaller than 20.

In addition to the problem of a large standard error, the age-race-sex-adjusted rates in this volume may be biased due to one or more deaths in a small age-race-sex population group. One death out of an estimated population of five, for example, would produce a death rate of 20,000 per 100,000 population. If this rate were applied to the appropriate age-race-sex group of the standard population, a very large number of expected deaths would result and the adjusted rate would be biased. In this volume an adjusted rate is flagged if: a) applying the age-race-sex-specific rates of a county for a given cause to the standard population results in more than 25 percent of the total expected deaths being generated by one cell, and b) the denominator of the rate is also less than 50 (an average of 10 per year). These criteria will catch only the worst problems. Only twenty-nine out of a total of 1,900 county adjusted rates in this volume are flagged by this method.

In addition to putting asterisks by those 1985-89 adjusted rates with a large bias due to an extremely high age-race-sex-specific rate, the rates have been recomputed by substituting the appropriate North Carolina age-race-sex-cause-specific rate in the problem cell. The table on the next page compares the flagged rates with the rates where the state rate has been substituted. The reader who must use one of these flagged rates is advised to use the rate with the substitution instead. If the latter rate is clearly out of line with the North Carolina rate in the last column, the rate should be treated as missing data.

**1985-89 Age-Race-Sex-Adjusted Death Rates:  
Flagged Rates and Rates after Substitution  
of State Rate in Problem Cells**

County	Cause	Problem Cell	Numerator	Denominator	Adjusted Rate With Substitution		N.C. Rate For Cause
					Flagged Rate	Adjusted Rate	
Alleghany	Cancer of Colon, etc.	NWF 75-84	1	39	24.5	14.6	20.2
Alleghany	Lung Cancer	NWM 55-64	1	35	66.6	48.6	53.8
Alleghany	Chronic Liver Disease	NWF 55-64	1	41	28.0	4.2	10.4
Alleghany	Septicemia	NWF 75-84	1	39	35.7	6.3	9.1
Ashé	Cancer of Colon, etc.	NWM 75-84	1	25	20.1	11.2	20.2
Ashé	Lung Cancer	NWM 65-74	1	36	47.4	35.5	53.8
Ashé	Diabetes	NWF 75-84	1	23	26.3	9.3	17.3
Avery	Cancer	NWF 85+	1	0	335.5	197.9	188.9
Avery	Cancer of Colon, etc.	NWF 65-74	1	21	54.8	17.6	20.2
Avery	Chronic Liver Disease	NWM 55-59	1	48	28.2	13.8	10.4
Clay	Cancer	NWF 75-84	1	8	207.3	159.2	188.9
Dare	Nephritis, etc.	NWM 85+	2	19	13.2	7.0	8.2
Graham	Heart Disease	NWM 75-84	3	5	433.9	301.1	300.6
Graham	Pneumonia and Influenza	NWF 85+	2	5	73.5	18.5	28.1
Graham	Septicemia	NWM 65-74	1	40	21.1	8.0	9.1
Haywood	Nephritis, etc.	NWM 85+	1	44	5.3	4.1	8.2
Hyde	Atherosclerosis	WM 85+	1	49	7.4	3.5	7.4
Hyde	Prostate Cancer	WM 85+	2	49	46.5	29.6	25.6
Hyde	Pneumonia and Influenza	WM 85+	2	49	16.1	9.8	28.1
Hyde	Septicemia	WM 85+	1	49	7.4	3.1	9.1
Macon	Prostate Cancer	NWM 75-84	2	29	56.2	26.3	25.6
Madison	Cancer	NWM 65-74	3	25	240.9	184.7	188.9
Madison	Lung Cancer	NWF 65-74	1	35	62.0	39.8	53.8
Madison	Prostate Cancer	NWM 65-74	1	25	67.1	25.8	25.6
Mitchell	Stroke	NWF 65-74	1	24	82.2	51.3	71.9
Tyrrell	Atherosclerosis	NWF 85+	1	37	3.8	0.4	7.4
Watauga	Pneumonia and Influenza	NWF 85+	1	20	22.7	16.5	28.1
Watauga	Chronic Lung Disease	NWM 75-84	1	26	28.1	19.9	29.1
Yancey	Other Injuries	NWF 65-74	1	33	53.3	23.9	

## IV. NORTH CAROLINA MORTALITY HIGHLIGHTS

In the 1988 *Leading Causes of Mortality*, extensive analyses of North Carolina's mortality experience were presented. That volume contains statistical tables, maps, and graphs as well as cause-specific discussions of trends, geographic patterns, risk factors, and recent research. There has been little change in the overall mortality picture since 1988. Therefore, this section will highlight 1989 death rates for selected causes (depicted in Table 1) and recent changes in rates. The reader should consult the 1988 volume for a detailed discussion of each cause.

- Table 1 shows that a total of 57,438 North Carolinians died in 1989, for a crude rate of 8.7 deaths per 1,000 population. The 1989 crude death rate was below the 1988 rate of 8.9 but slightly above the 1987 rate of 8.6. The five-year (1985-89) crude death rate was 8.7.
- The median age at death in 1989 was 72.8 years, down slightly from 72.9 in 1988, but above the 1987 median of 72.6 years. In general, the median age at death has increased steadily over the last three decades.
- In descending order, the ten leading causes of death in 1989 were heart disease, cancer, cerebrovascular disease, unintentional injuries, chronic obstructive pulmonary disease, pneumonia and influenza, diabetes, suicide, chronic liver disease/cirrhosis, and homicide. The order is unchanged from 1988. These causes accounted for 83 percent of total deaths in 1989. The two leading causes—heart disease and cancer—accounted for 56 percent of total deaths.
- The mortality rate for heart disease decreased by nearly four percent, which follows a small decrease (less than two percent) in 1988. Decreases have occurred during six of the last seven years. In 1987, 35 percent of North Carolina deaths were due to heart disease; this dropped to 33 percent in 1989. The reduction in the 1989 total death rate can be attributed primarily to the decrease in heart disease mortality.
- Cancer mortality, which has increased steadily during the last nine years, increased slightly (about one percent) in 1989, following an increase of almost four percent in 1988. Among the four major cancers, prostate cancer increased most (five percent), following a six percent increase in 1988. Cancer of the trachea, bronchus, and lung—which is the most frequently occurring cancer—increased by three percent following an increase of six percent in 1988, while the mortality rate for cancer of the colon, rectum, and anus was essentially unchanged. Cancer of the female breast, which increased by six percent in 1988, decreased slightly (one percent) in 1989. Among the less common cancers, non-Hodgkins lymphoma and leukemia increased by thirteen and seven percent respectively. Rates for stomach, pancreatic, and liver cancers each decreased between seven and eight percent. Cancer of the cervix uteri and of the ovary and other uterine adnexa both decreased by less than one percent. Malignant melanoma (a rare cancer) decreased by 20 percent.
- Of the major diseases presented in Table 1, nephritis/nephrosis displayed the greatest percentage change in rates between 1988 and 1989, with an increase of 13 percent. This follows a slight decrease (one percent) in 1988. Chronic liver disease/cirrhosis increased seven percent after an increase of two percent in 1988. Atherosclerosis showed the largest decrease (12 percent) in 1989, which follows a 20 percent decrease in 1988. Chronic obstructive pulmonary disease, which increased by 16 percent in 1988, decreased nine percent; and septicemia, which decreased 22 percent in 1988, decreased slightly (two percent) in 1989.
- Among the leading causes of death, the homicide rate displayed the greatest percentage change in rate between 1988 and 1989, an increase of 20 percent. This follows modest decreases in 1987 and 1988. The 1989 rate was the highest since 1980.
- The suicide death rate increased ten percent following a modest decline (two percent) in 1988. The 1989 rate was the highest in the past five years.
- The state's infant death rate dropped 8.7 percent in 1989 to 11.5 deaths per 1,000 live births. The high rate in 1988 (the highest in the nation) involved a spike in nonwhite postneonatal deaths attributed to SIDS.

- The above changes reflect increases and decreases in **unadjusted** death rates. After adjusting for changes in the state's age structure over the last decade, the following major percentage changes in mortality **risk** occurred among the leading causes between 1980 and 1989: Total mortality decreased nine percent; two of the three major causes—heart disease and cerebrovascular disease—dropped 20 percent and 30 percent respectively; and mortality from cancer increased by five percent. Cancer of the trachea, bronchus, and lung increased 27 percent, and cancer of the prostate and female breast increased by 11 percent and 12 percent respectively. Substantial increases in age-adjusted rates occurred for chronic obstructive pulmonary disease (19%), diabetes mellitus (23%), and suicide (14%), while unintentional injury and chronic liver disease and cirrhosis each decreased by 15 percent. The rate for atherosclerosis (which is rarely considered an underlying cause) decreased 53 percent, and the 1989 rate for homicide was nine percent less than the 1980 rate.
- Comparing North Carolina's 1988 age-adjusted death rates by race and sex to those of the U.S. (latest year available for the U.S.), the following major percentage excesses are noted for North Carolina:

Heart Disease: nonwhite males (20%)

Cerebrovascular Disease: white males (21%), nonwhite males (42%), nonwhite females (30%)

Atherosclerosis: nonwhite males (55%) and nonwhite females (24%)

Cancer: nonwhite males (21%)

Diabetes Mellitus: nonwhite males (42%) and nonwhite females (35%)

Chronic Liver Disease and Cirrhosis: nonwhite females (49%)

Unintentional Motor Vehicle Injuries: white females (22%), nonwhite males (61%) and  
nonwhite females (41%)

All Other Unintentional Injuries: white females (28%), nonwhite males (57%) and  
nonwhite females (25%)

Homicide: nonwhite males (31%)

For all causes, the age-adjusted death rate for white males exceeded the U.S. rate by five percent; whereas the rate for white females was two percent less than the U.S. rate. Rates for nonwhite males and females exceeded the corresponding U.S. rates by twenty percent and seven percent respectively.

**TABLE 1**  
**MORTALITY STATISTICS FOR 1989 AND 1985-89**  
**NORTH CAROLINA RESIDENTS**

Cause of Death — Ninth Revision International Classification of Diseases	Number of deaths 1989	Five-Year Total 1985-89	Death Rate 1989	Five-Year Death Rate 1985-89
All Causes .....	57,438	277,989	8.7	8.7
Diseases of Heart .....	18,961	96,326	288.6	300.6
Cerebrovascular Disease .....	4,613	23,032	70.2	71.9
Atherosclerosis .....	3,69	2,381	5.6	7.4
Cancer .....	12,969	60,536	197.4	188.9
Lip, Oral Cavity, and Pharynx	.....	.....	.....	.....
Stomach .....	2,38	1,094	3.6	3.4
Colon, Rectum, and Anus .....	3,04	1,566	4.6	4.9
Liver .....	1,349	6,461	20.5	20.2
Pancreas .....	1,72	803	2.6	2.5
Larynx .....	624	3,107	9.5	9.7
Trachea, Bronchus, and Lung	.....	.....	.....	.....
Malignant Melanoma .....	104	482	1.6	1.5
Female Breast .....	3,843	17,246	58.5	53.8
Cervix Uteri .....	164	859	2.5	2.7
Ovary and Other Uterine Adnexa .....	1,099	5,288	32.2	31.9
Prostate .....	143	727	4.2	4.4
Bladder .....	307	1,464	9.0	8.8
Brain Tumors .....	891	3,959	28.2	25.6
Non-Hodgkins Lymphoma .....	218	1,046	3.3	3.3
Leukemia .....	304	1,539	4.6	4.8
Septicemia .....	456	1,890	6.9	5.9
Diabetes Mellitus .....	490	2,162	7.5	6.7
Pneumonia and Influenza .....	526	2,902	8.0	9.1
Chronic Obstructive Pulmonary Disease and Allied Conditions .....	1,372	5,539	20.9	17.3
Chronic Liver Disease and Cirrhosis .....	1,900	9,010	28.9	28.1
Nephritis, Nephrotic Syndrome, and Nephrosis .....	1,930	9,322	29.4	29.1
Unintentional Motor Vehicle Injuries .....	.....	.....	.....	.....
All Other Unintentional Injuries and Adverse Effects .....	.....	.....	.....	.....
Suicide .....	571	3,338	11.6	10.4
Homicide .....	535	2,364	8.1	8.2
.....	1,580	7,966	24.1	24.9
.....	1,597	7,662	24.3	23.9
.....	871	4,003	13.3	12.5
.....	704	3,015	10.7	9.4
.....	(960-978) .....	(960-978) .....	.....	.....



## **V. TABLES AND FIGURES: MORTALITY STATISTICS FOR 1985-89**



TABLE - 2

MORTALITY STATISTICS FOR 1989

NORTH CAROLINA RESIDENTS

TOTAL DEATHS (PER 1000 POPULATION)

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	57438	8.7	277989	8.7	8.7
REGIONS					
D.E.H.N.R. I	7454	10.1	36049	9.9	8.4
D.E.H.N.R. II	11767	8.5	56078	8.4	8.6
D.E.H.N.R. III	11946	8.9	57799	8.8	8.5
D.E.H.N.R. IV	10517	8.3	50738	8.3	8.6
D.E.H.N.R. V	6144	8.4	29994	8.3	9.3
D.E.H.N.R. VI	5876	9.3	29074	9.4	9.2
D.E.H.N.R. VII	3734	7.8	18257	7.9	8.9
COUNTIES					
1 ALAMANCE	1097	10.3	5047	9.7	8.3
2 ALEXANDER	223	8.0	984	7.2	8.2
3 ALLEGHANY	108	10.8	529	10.8	9.2
4 ANSON	282	10.8	1367	10.4	8.7
5 ASHE	240	10.2	1167	10.0	9.0
6 AVERY	162	10.4	699	9.2	12.7
7 BEAUFORT	480	11.4	2414	11.4	10.1
8 BERTIE	238	11.3	1223	11.6	9.6
9 BLADEN	338	10.9	1583	10.3	9.8
10 BRUNSWICK	436	8.5	2040	8.3	8.2
11 BUNCOMBE	1794	10.2	8852	10.3	8.5
12 BURKE	670	8.6	3207	8.4	9.0
13 CABARRUS	881	9.1	4306	9.1	8.5
14 CALDWELL	590	8.3	2877	8.1	8.8
15 CAMDEN	66	10.6	299	10.0	9.1
16 CARPENTER	499	9.7	2346	9.4	9.2
17 CASWELL	208	9.4	961	8.6	8.2
18 CATAWBA	1080	9.1	4843	8.4	8.9
19 CHATHAM	331	8.8	1664	9.1	8.1
20 CHEROKEE	217	10.3	1033	10.0	7.4
21 CHOWAN	167	12.3	823	12.2	9.2
22 CLAY	75	10.4	374	10.4	7.2
23 CLEVELAND	835	9.5	4043	9.3	8.9
24 COLUMBUS	558	10.6	2728	10.4	9.8
25 CRAVEN	620	7.5	2836	7.0	6.8
26 CUMBERLAND	1568	6.0	7607	5.9	10.1
27 CURRITUCK	119	8.3	663	9.7	10.0
28 DARE	179	7.9	795	7.9	7.7
29 DAVIDSON	1043	8.3	4957	8.1	8.5
30 DAVIE	227	8.1	1161	8.5	9.1
31 DUPLIN	438	10.4	2221	10.6	9.5
32 DURHAM	1492	8.5	7186	8.5	8.4
33 EUGECOMBE	580	9.9	2900	9.8	9.2
34 FORSYTH	2403	9.0	11672	8.9	8.5
35 FRANKLIN	345	9.6	1654	9.5	7.9
36 GASTON	1669	9.6	7955	9.2	9.6
37 GATES	103	10.4	541	11.2	6.9
38 GRAHAM	82	11.6	369	10.4	10.4
39 GRANVILLE	421	10.7	1924	10.1	9.0
40 GREENE	130	7.9	656	8.0	8.3
41 GUILFORD	2992	8.8	14489	8.7	8.5

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
 TOTAL DEATHS(PER 1000 POPULATION) CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	628	11.1	3080	10.9	8.7
43 HARNETT	577	8.6	2919	9.0	9.7
44 HAYWOOD	480	10.0	2525	10.5	8.5
45 HENDERSON	792	11.3	3819	11.2	8.0
46 HEREFORD	259	11.1	1323	11.1	8.6
47 HOKE	192	7.9	799	6.8	8.3
48 HYDE	64	11.3	342	11.8	9.8
49 IREDELL	890	9.6	4151	9.2	8.6
50 JACKSON	244	8.9	1119	8.3	8.2
51 JOHNSTON	773	9.5	3744	9.4	9.4
52 JONES	77	7.8	461	9.3	8.0
53 LEE	385	9.1	1869	9.0	9.2
54 LENOIR	608	10.1	3077	10.2	9.6
55 LINCOLN	390	7.9	1898	8.0	8.8
56 MCDOWELL	358	9.8	1755	9.7	9.0
57 MACON	286	12.0	1318	11.3	9.2
58 MADISON	188	10.8	910	10.5	8.8
59 MARTIN	287	11.0	1426	10.8	9.5
60 MECKLENBURG	3557	7.3	17097	7.4	8.2
61 MITCHELL	162	11.1	799	11.0	7.1
62 MONTGOMERY	202	8.2	1096	9.1	8.1
63 MOORE	641	10.7	3174	11.0	8.6
64 NASH	747	10.2	3524	9.8	9.6
65 NEW HANOVER	997	8.4	5015	8.7	9.1
66 NORTHAMPTON	259	11.8	1325	11.9	9.3
67 ONSLOW	539	4.1	2683	4.3	8.3
68 ORANGE	551	6.1	2557	5.9	7.6
69 PAMLICO	131	12.0	574	10.5	8.5
70 PASQUOTANK	307	9.8	1488	9.8	8.7
71 PENDER	267	9.5	1224	9.3	8.3
72 PERQUIMANS	109	9.7	587	10.9	7.9
73 PERSON	294	9.4	1425	9.2	8.3
74 PITTS	804	7.7	4026	8.1	9.3
75 POLK	193	12.8	931	12.7	7.7
76 RANDOLPH	806	7.7	3926	7.8	8.5
77 RICHMOND	516	11.2	2403	10.5	9.5
78 RUBESON	998	9.3	4865	9.1	9.4
79 ROCKINGHAM	885	10.3	4256	9.9	9.4
80 ROWAN	1153	10.7	5440	10.3	8.5
81 RUTHERFORD	604	10.4	2925	10.2	8.5
82 SAMPSON	486	9.6	2576	10.2	9.0
83 SCOTLAND	344	10.0	1605	9.4	10.6
84 STANLY	458	8.8	2402	9.5	8.5
85 STUKES	290	7.8	1425	7.9	8.8
86 SURRY	596	9.5	2993	9.7	8.6
87 SWAIN	144	13.1	679	12.7	9.9
88 TRANSYLVANIA	264	10.0	1156	8.9	7.8
89 TYRRELL	47	11.2	231	11.2	9.4
90 UNION	631	7.3	2959	7.2	8.6
91 VANCE	480	12.2	2158	11.1	9.7
92 WAKE	2357	5.9	11397	6.1	8.0
93 WARREN	194	11.7	1039	12.6	8.9
94 WASHINGTON	145	10.0	715	9.8	9.9
95 WATAUGA	203	5.8	1099	6.4	7.1
96 WAYNE	936	9.3	4574	9.3	10.2
97 WILKES	527	8.6	2620	8.6	8.7
98 WILSON	674	10.2	3292	10.1	10.0
99 YADKIN	321	10.5	1497	10.0	8.5
100 YANCEY	149	9.3	702	8.8	6.9

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
 DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## GENERAL MORTALITY

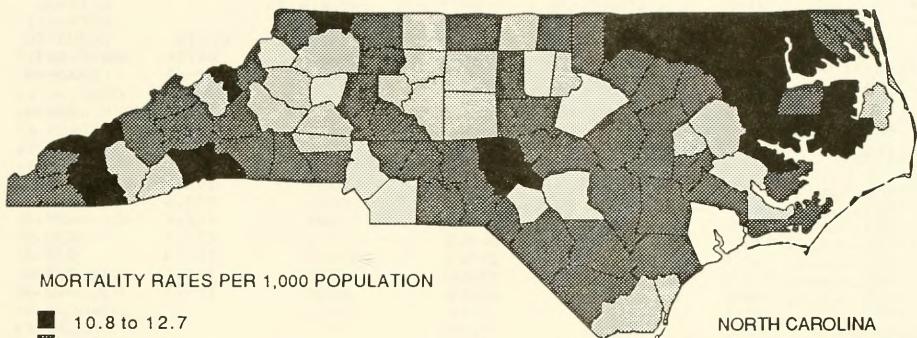


FIGURE 2.A

## GENERAL MORTALITY

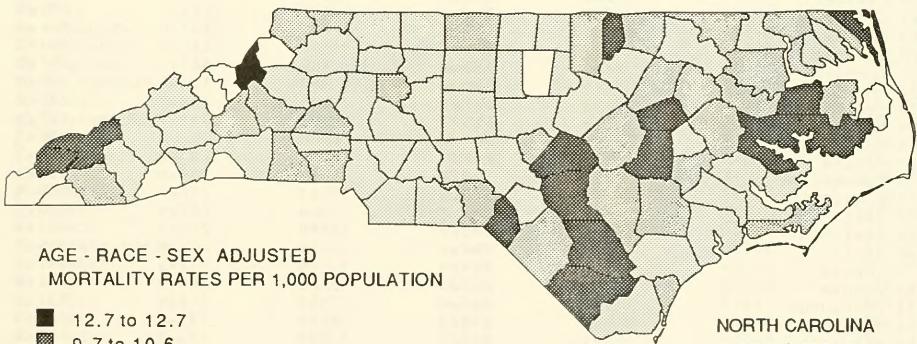


FIGURE 2.B

T A B L E - 3

M U R T A L I T Y S T A T I S T I C S F O R 1 9 8 9

N O R T H C A R O L I N A R E S I D E N T S

D I S E A S E S O F T H E H E A R T

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	18961	288.6	96326	300.6	300.6
REGIONS					
D.E.H.N.R. I	2545	343.7	12838	352.3	281.1
D.E.H.N.R. II	4026	291.8	19908	297.8	304.8
D.E.H.N.R. III	3854	287.8	19934	302.8	289.7
D.E.H.N.R. IV	3363	265.4	17122	279.9	296.5
D.E.H.N.R. V	2038	277.2	10300	285.3	331.3
D.E.H.N.R. VI	1915	303.6	10118	326.8	327.1
D.E.H.N.R. VII	1220	256.1	6106	264.5	303.6
COUNTIES					
1 ALAMANCE	347	324.4	1743	333.3	280.0
2 ALEXANDER	74	264.0	372	272.9	308.7
3 ALLEGHANY	39	390.3	169	344.8	278.1
4 ANSUN	94	358.5	525	400.2	323.8
5 ASHE	96	408.8	453	387.3	277.4
6 AVERY	59	380.5	274	360.9	507.1
7 BEAUFORT	163	385.9	865	409.3	361.0
8 BERTIE	71	338.0	421	398.3	344.1
9 BLADEN	126	406.3	564	365.3	361.2
10 BRUNSWICK	146	283.3	709	288.8	287.7
11 BUNCOMBE	566	322.4	2921	340.3	269.1
12 BURKE	259	333.1	1247	325.4	348.0
13 CABARRUS	312	320.7	1513	319.7	291.9
14 CALDWELL	202	282.7	1019	287.8	300.8
15 CAMDEN	26	417.9	100	334.7	299.6
16 CARTERET	160	310.9	857	341.7	323.6
17 CASWELL	67	301.8	332	298.3	294.8
18 CATAWBA	367	309.9	1775	307.0	316.8
19 CHATHAM	103	275.0	590	324.4	283.2
20 CHEROKEE	79	373.6	402	387.3	247.5
21 CHOWAN	53	390.2	260	386.1	292.0
22 CLAY	25	347.7	136	378.7	276.7
23 CLEVELAND	328	373.7	1593	367.7	343.4
24 COLUMBUS	195	369.9	1000	381.1	358.7
25 CRAVEN	205	248.4	946	233.8	308.7
26 CUMBERLAND	451	171.1	2436	189.6	369.2
27 CURRITUCK	48	335.5	237	346.9	359.7
28 DAKE	47	206.2	248	247.4	238.1
29 DAVIDSON	369	293.7	1796	292.7	303.4
30 DAVIE	82	294.1	414	302.6	314.5
31 DUPLIN	146	346.9	774	371.1	332.5
32 DURHAM	431	246.9	2262	268.5	271.4
33 EDGECOMBE	198	334.0	952	321.4	313.1
34 FORSYTH	731	274.1	3853	292.7	278.4
35 FRANKLIN	121	336.1	609	351.3	290.2
36 GASTON	629	361.0	3141	363.3	380.2
37 GATES	33	333.3	182	376.6	284.5
38 GRAHAM	31	436.8	139	390.9	433.9*
39 GRANVILLE	128	324.5	655	343.2	312.5
40 GREENE	44	267.0	240	291.3	329.9
41 GUILFORD	900	265.4	4706	282.5	273.8

\* SEE SECTION 11

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
DISEASES OF THE HEART CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
72 HALIFAX	191	336.5	1087	385.0	319.1
73 HANCOCK	188	280.6	999	306.9	335.9
44 HAYWOOD	167	347.7	940	390.4	301.7
45 HENDERSON	267	379.4	1341	394.0	254.1
46 HERTFORD	74	315.9	453	381.0	295.2
47 HOKE	67	276.3	278	236.2	294.9
48 HYDE	22	387.5	116	400.5	326.5
49 IREDELL	301	325.2	1480	329.0	303.0
50 JACKSON	67	244.6	385	285.4	274.7
51 JOHNSTON	294	360.7	1460	368.0	366.2
52 JONES	23	231.8	140	283.6	249.2
53 LEE	139	327.2	695	334.9	345.2
54 LENOIR	207	345.0	1130	374.9	354.4
55 LINCOLN	134	271.2	692	292.1	313.5
56 MCDOWELL	125	343.1	640	352.5	299.5
57 MACON	93	390.0	466	399.7	220.3
58 MAIDSON	64	368.8	314	363.3	244.2
59 MARTIN	90	345.3	496	370.1	346.1
60 MECKLENBURG	1093	225.0	5477	235.9	269.2
61 MITCHELL	67	458.4	285	391.0	225.0
62 MONTGOMERY	69	281.1	388	321.7	281.5
63 MOURE	206	342.9	1073	372.6	277.8
64 NASH	230	312.7	1233	341.8	338.9
65 NEW HANOVER	320	268.9	1638	282.7	298.7
66 NORTHAMPTON	79	359.5	442	395.9	331.4
67 UNSLOW	163	123.9	727	115.3	257.7
68 ORANGE	161	177.1	757	174.8	232.0
69 PAMLICO	48	438.3	195	356.4	277.9
70 PASQUOTANK	100	318.1	592	389.0	341.4
71 PENDER	90	321.6	401	305.9	271.7
72 PERQUIMANS	28	248.5	179	332.5	232.1
73 PERSON	92	292.8	508	328.3	290.9
74 PITTS	239	230.1	1311	262.2	317.1
75 POLK	67	445.5	327	445.9	262.1
76 RANDOLPH	260	249.1	1389	275.5	289.4
77 RICHMOND	178	387.6	834	364.0	327.9
78 RUBESON	330	312.2	1661	310.4	333.0
79 ROCKINGHAM	295	342.0	1547	360.2	336.9
80 ROWAN	406	375.8	1904	361.1	289.1
81 RUTHERFORD	217	372.7	1109	385.9	306.3
82 SAMPSON	180	354.7	947	374.4	334.3
83 SCOTLAND	143	415.9	595	348.6	411.3
84 STANLY	169	326.0	876	345.1	296.7
85 STOKES	99	266.7	538	297.4	336.7
86 SURRY	213	340.9	1073	347.7	291.0
87 SWAIN	67	607.7	289	539.7	383.5
88 TRANSLVANIA	82	311.4	379	292.2	233.0
89 TYRRELL	18	429.0	94	455.3	376.5
90 UNION	213	246.5	1085	264.5	318.4
91 VANCE	175	446.2	803	412.1	365.6
92 WAKE	716	178.9	3595	190.9	262.3
93 WARREN	62	373.3	356	430.8	318.3
94 WASHINGTON	57	392.9	252	346.2	360.3
95 WATAUGA	60	170.2	395	226.3	265.5
96 WAYNE	319	318.0	1661	336.8	383.9
97 WILKES	190	310.7	987	323.4	315.4
98 WILSON	243	368.4	1118	343.2	345.3
99 YADKIN	106	347.1	539	359.9	294.7
100 YANCEY	41	256.2	225	283.2	213.5

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## DISEASES OF THE HEART

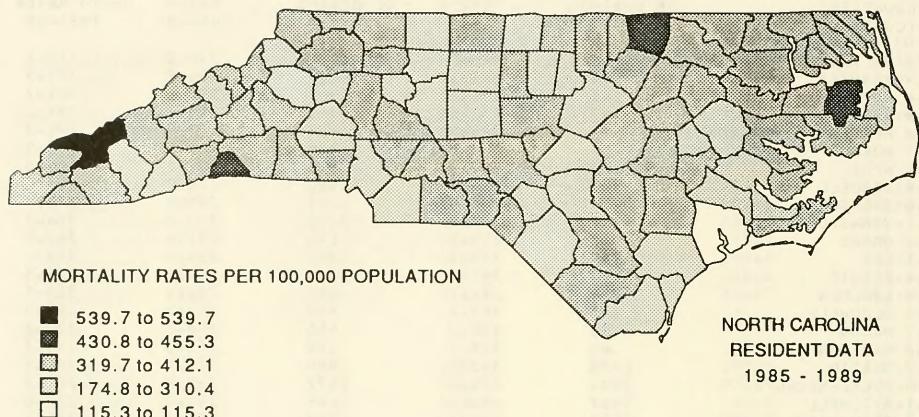


FIGURE 3.A

## DISEASES OF THE HEART

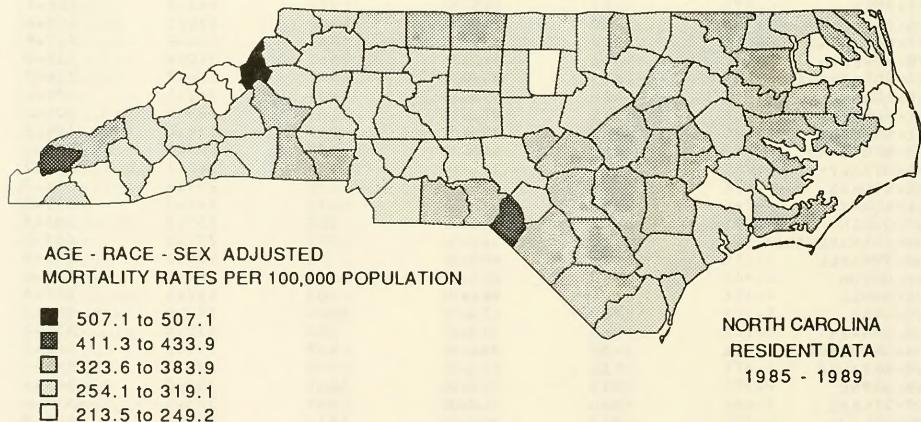


FIGURE 3.B

T A B L E - 4

M O R T A L I T Y S T A T I S T I C S F O R 1 9 8 9

N O R T H C A R O L I N A R E S I D E N T S

C E R E B R O V A S C U L A R

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	4613	70.2	23032	71.9	71.9
REGIONS					
D e E H N R I	566	76.4	2888	79.3	64.4
D e E H N R II	864	62.6	4454	66.6	69.6
D e E H N R III	992	74.1	4833	73.4	70.5
D e E H N R IV	875	69.0	4193	68.5	70.2
D e E H N R V	511	69.5	2571	71.2	81.7
D e E H N R VI	503	79.8	2520	81.4	78.2
D e E H N R VII	302	63.4	1573	68.1	79.5
COUNTIES					
1 ALAMANCE	83	77.6	374	71.5	61.0
2 ALEXANDER	15	53.5	56	41.1	42.2
3 ALLEGHANY	9	90.1	50	102.0	71.2
4 ANSON	34	129.7	126	96.0	73.9
5 ASHE	18	76.6	87	74.4	61.5
6 AVERY	4	25.8	33	43.5	35.0
7 BEAUFORT	36	85.2	216	102.2	88.0
8 BERTIE	23	109.5	123	116.4	91.6
9 BLADEFON	27	87.1	135	87.4	81.3
10 BRUNSWICK	33	64.0	138	58.2	57.9
11 BUNCOMBE	131	74.6	779	90.8	71.2
12 BURKE	32	41.2	200	52.2	56.6
13 CABARRUS	65	66.8	361	76.3	72.3
14 CALDWELL	38	53.2	206	58.2	62.3
15 CAMDEN	5	80.4	22	73.6	65.5
16 CARTERET	44	85.5	165	65.8	73.4
17 CASWELL	25	112.6	92	82.7	77.9
18 CATANBAA	76	64.2	349	60.4	67.2
19 CHATHAM	20	53.4	129	70.9	60.1
20 CHEROKEE	10	47.3	73	70.3	47.0
21 CHOWAN	22	162.0	102	151.5	105.6
22 CLAY	5	69.5	25	69.6	43.7
23 CLEVELAND	51	58.1	274	63.2	60.8
24 COLUMBUS	43	81.6	253	96.4	92.1
25 CRAVEN	56	67.9	234	57.8	70.5
26 CUMBERLAND	124	47.1	566	44.1	90.6
27 CURRITUCK	2	14.0	38	55.6	59.8
28 DARE	10	43.9	54	53.9	52.2
29 DAVIDSON	88	70.0	374	60.9	67.3
30 DAVIE	13	46.6	79	57.8	69.9
31 DUPLIN	41	97.4	210	100.7	83.9
32 DURHAM	104	59.6	510	60.5	56.9
33 EDGECOMBE	49	82.7	300	101.3	93.6
34 FORSYTH	207	77.6	964	73.2	68.2
35 FRANKLIN	42	116.7	163	94.0	76.0
36 GASTON	148	84.9	675	78.1	82.2
37 GATES	11	111.1	36	74.5	60.2
38 GRAHAM	8	112.7	23	64.7	46.3
39 GRANVILLE	44	111.5	189	99.0	81.9
40 GREENE	13	78.9	54	65.5	63.4
41 GUILFORD	252	74.3	1298	77.9	73.7

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
CEREBROVASCULAR CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	67	118.0	292	103.4	76.0
43 HARNETT	41	61.2	216	66.3	73.1
44 HAYWOOD	35	72.9	190	78.9	63.9
45 HENDERSON	64	90.9	328	96.4	59.6
46 HERTFORD	28	119.5	109	91.7	65.3
47 HUKE	12	49.5	53	45.0	48.9
48 HYDE	6	105.7	41	141.5	101.5
49 IREDELL	64	69.2	356	79.1	72.9
50 JACKSON	18	65.7	74	54.9	49.8
51 JOHNSTON	71	87.1	300	75.6	76.0
52 JONES	6	60.5	46	93.2	74.0
53 LEE	30	70.6	123	59.3	60.7
54 LENOIR	50	83.3	278	92.2	84.1
55 LINCOLN	46	93.1	198	83.6	92.3
56 MCDOWELL	34	93.3	161	86.7	91.4
57 MACON	22	92.2	86	73.8	53.3
58 MADISON	22	126.8	107	123.8	108.7
59 MARTIN	24	92.1	133	100.8	78.5
60 MECKLENBURG	220	45.3	1204	51.9	58.9
61 MITCHELL	15	102.6	65	89.2	82.2*
62 MONTGOMERY	18	73.3	89	73.8	63.3
63 MOORE	67	111.5	307	106.6	81.0
64 NASH	61	82.9	291	80.7	79.0
65 NEW HANOVER	93	78.2	526	90.8	96.8
66 NORTHHAMPTON	23	104.7	130	116.4	75.9
67 ONSLOW	31	23.6	175	27.8	66.6
68 ORANGE	35	38.5	180	41.6	54.9
69 PAMlico	15	137.0	55	100.5	78.4
70 PASQUOTANK	31	98.6	101	66.4	56.9
71 PENDER	17	60.8	106	80.9	72.4
72 PERQUIMANS	8	71.0	55	102.2	69.7
73 PERSON	28	89.1	129	83.4	75.1
74 PITTS	68	65.5	367	73.4	82.9
75 POLK	18	119.7	74	100.9	52.4
76 RANDOLPH	59	56.5	345	68.4	75.6
77 RICHMOND	40	100.2	229	100.0	89.3
78 ROBESON	80	74.3	428	80.0	83.9
79 ROCKINGHAM	82	95.1	395	92.0	87.3
80 ROWAN	95	87.9	525	99.6	79.4
81 RUTHERFORD	56	98.2	273	95.0	75.8
82 SAMPSON	44	86.7	273	107.9	93.8
83 SCOTLAND	18	52.3	149	87.3	98.3
84 STANLY	35	67.5	247	97.3	88.9
85 STOKES	27	72.7	113	62.5	74.3
86 SURRY	51	81.6	239	77.4	68.0
87 SWAIN	13	117.9	46	85.9	63.8
88 TRANSYLVANIA	16	60.8	79	60.9	40.5
89 TYRKELL	6	143.0	24	116.3	101.1
90 UNION	49	56.7	209	51.0	63.9
91 VANCE	31	79.0	138	70.8	52.5
92 WAKE	185	46.2	891	47.3	66.0
93 WARREN	16	96.3	89	107.7	52.8
94 WASHINGTON	11	75.8	46	63.2	74.6
95 WATAUGA	19	53.9	87	50.3	59.2
96 WAYNE	72	71.8	386	78.3	85.4
97 WILKES	40	65.4	223	73.1	83.2
98 WILSON	69	104.6	339	104.1	102.0
99 YADKIN	19	62.2	113	75.5	62.0
100 YANCEY	25	156.2	66	83.1	49.5

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## CEREBROVASCULAR DISEASE

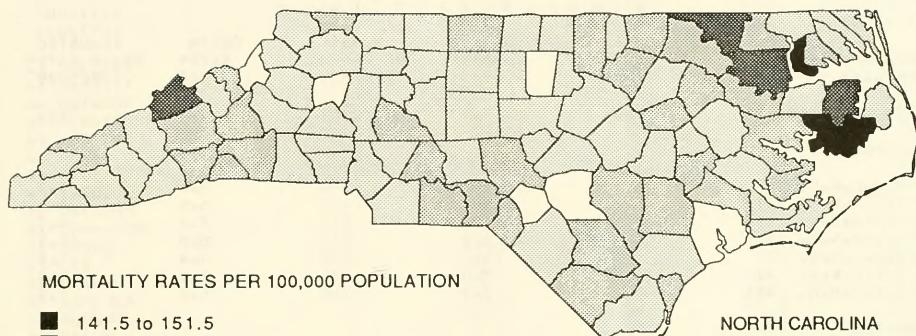


FIGURE 4.A

## CEREBROVASCULAR DISEASE

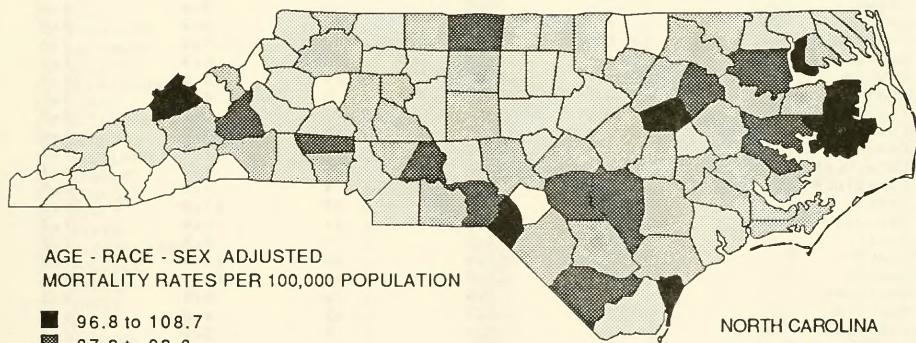


FIGURE 4.B

T A B L E - 5

M U R T A L I T Y S TAT I S T I C S F O R 1 9 8 9

N O R T H C A R O L I N A R E S I D E N T S

A T H E R O S C L E R O S I S

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	369	5.6	2381	7.4	7.4
REGIONS					
D.E.H.N.R. I	47	6.3	340	9.3	7.3
D.E.H.N.R. II	71	5.1	432	6.5	6.6
D.E.H.N.R. III	69	5.2	472	7.2	6.7
D.E.H.N.R. IV	76	6.2	488	8.0	8.3
D.E.H.N.R. V	32	4.4	232	6.4	7.5
D.E.H.N.R. VI	47	7.5	273	8.8	9.4
D.E.H.N.R. VII	25	5.2	144	6.2	7.5
COUNTIES					
1 ALAMANCE	7	6.5	62	11.9	10.1
2 ALEXANDER	1	3.6	6	4.4	4.3
3 ALLEGHANY	0	0.0	4	8.2	4.9
4 ANSON	0	0.0	4	3.0	2.1
5 ASHE	3	12.8	12	10.3	5.7
6 AVERY	0	0.0	1	1.3	1.1
7 BEAUFORT	1	2.4	9	4.3	3.7
8 BERTIE	1	4.8	9	8.5	8.3
9 BLADEFON	3	9.7	19	12.3	11.8
10 BRUNSWICK	1	1.9	11	4.5	5.0
11 GUNCOMBE	12	6.8	110	12.8	10.0
12 BURKE	2	2.6	14	3.7	3.7
13 CABARKUS	4	4.1	16	3.4	2.8
14 CALDWELL	4	5.6	20	5.6	5.2
15 CAMDEN	2	32.1	5	10.7	13.8
16 CARTERET	0	0.0	4	1.6	1.2
17 CASWELL	2	9.0	6	5.4	4.6
18 CATAWBA	8	6.8	28	4.8	5.0
19 CHATHAM	0	0.0	17	9.3	7.6
20 CHEROKEE	1	4.7	2	1.9	1.2
21 CHOWAN	2	14.7	14	20.8	14.9
22 CLAY	0	0.0	3	8.4	3.5
23 CLEVELAND	4	4.6	27	6.2	5.9
24 COLUMBUS	2	3.8	11	4.2	3.6
25 CRAVEN	7	8.5	31	7.7	9.7
26 CUMBERLAND	4	1.5	39	3.0	6.7
27 CURRITUCK	0	0.0	4	5.9	6.5
28 DARE	3	13.2	17	17.0	16.0
29 DAVIDSON	4	3.2	39	6.4	7.2
30 DAVIE	1	3.6	5	3.7	4.2
31 DUPLIN	9	21.4	34	16.3	14.9
32 DURHAM	21	12.0	142	16.9	15.6
33 EDGECOMBE	5	8.4	26	8.8	9.3
34 FURSYTH	10	3.7	63	4.8	4.5
35 FRANKLIN	1	2.8	5	2.9	2.7
36 GASTON	2	1.1	46	5.3	5.7
37 GATES	1	10.1	5	10.3	7.6
38 GRAHAM	0	0.0	4	11.2	8.1
39 GRANVILLE	4	10.1	16	8.4	7.6
40 GREENE	0	0.0	2	2.4	3.1
41 GUILFORD	23	6.8	166	10.0	9.2

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
ATHEROSCLEROSIS CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE# 1989	NUMBER OF DEATHS 1985-89	DEATH RATE# 1985-89	ADJUSTED DEATH RATE# 1985-89
42 HALIFAX	3	5.3	32	11.3	8.4
43 HARNETT	1	1.5	13	4.0	4.6
44 HAYWOOD	3	6.2	19	7.9	8.2
45 HENDERSON	3	4.3	29	8.5	6.5
46 HERTFORD	2	8.5	10	8.4	7.9
47 HOKE	1	4.1	6	5.1	2.8
48 HYDE	0	0.0	2	6.9	7.4*
49 IREDELL	5	5.4	30	6.7	6.0
50 JACKSON	2	7.3	13	9.6	7.8
51 JOHNSTON	4	4.9	24	6.0	6.2
52 JONES	1	10.1	5	10.1	9.0
53 LEE	3	7.1	19	9.2	9.5
54 LENOIR	10	16.7	46	15.3	15.0
55 LINCOLN	3	6.1	18	7.6	10.8
56 MCDOWELL	6	16.5	26	14.3	10.7
57 MACON	1	4.2	11	9.4	4.8
58 MADISON	1	5.8	7	8.1	4.7
59 MARTIN	0	0.0	9	6.8	6.5
60 MECKLENBURG	24	4.9	141	6.1	7.0
61 MITCHELL	1	6.8	5	6.9	3.6
62 MONTGOMERY	0	0.0	5	4.1	3.4
63 MOORE	9	15.0	46	16.0	11.8
64 NASH	1	1.4	13	3.6	3.8
65 NEW HANOVER	12	10.1	60	10.4	11.3
66 NORTHHAMPTON	4	18.2	22	19.7	14.6
67 ONDOW	1	0.8	18	2.9	7.0
68 ORANGE	6	6.6	38	8.8	11.3
69 PAMlico	1	9.1	2	3.7	2.3
70 PASQUOTANK	2	6.4	8	5.3	4.5
71 PENDER	0	0.0	6	4.6	5.3
72 PERQUIMANS	4	35.5	26	48.3	35.3
73 PERSON	1	3.2	10	6.5	6.1
74 PIT	3	2.9	18	3.6	5.0
75 POLK	2	13.3	11	15.0	6.5
76 RANDOLPH	1	1.0	16	3.2	3.9
77 RICHMOND	4	8.7	26	11.3	9.5
78 ROBESON	8	7.4	54	10.1	12.2
79 ROCKINGHAM	2	2.3	19	4.4	4.2
80 RUTHERFORD	10	9.3	76	14.4	10.9
81 SAMSON	5	8.6	37	12.9	9.6
82 SCOTLAND	1	2.0	11	4.3	3.3
83 STANLY	1	2.9	9	5.3	8.1
84 STANLY	9	17.4	31	12.2	10.2
85 STOKES	1	2.7	12	6.6	5.2
86 SURRY	2	3.2	27	8.7	8.1
87 SWAIN	1	9.1	5	9.3	6.0
88 TRANSYLVANIA	3	11.4	17	13.1	8.1
89 TYRRELL	0	0.0	1	4.8	3.8*
90 UNION	1	1.2	13	3.2	3.7
91 VANCE	0	0.0	4	2.1	1.6
92 WAKE	12	3.0	76	4.0	5.7
93 WARREN	3	18.1	8	9.7	4.4
94 WASHINGTON	0	0.0	6	8.2	8.4
95 WATAUGA	0	0.0	6	4.6	3.4
96 WAYNE	7	7.0	44	8.9	11.2
97 WILKES	11	18.0	25	8.2	8.9
98 WILSON	10	15.2	36	11.1	11.9
99 YADKIN	2	6.5	8	5.3	3.7
100 YANCEY	0	0.0	6	7.6	4.4

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

TABLE - 6  
MORTALITY STATISTICS FOR 1989  
NORTH CAROLINA RESIDENTS

CANCER - ALL SITES

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	AJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	12969	197.4	60536	188.9	188.9
REGIONS					
D.E.H.N.R. I	1717	231.9	7952	218.2	187.3
D.E.H.N.R. II	2608	189.0	12337	184.5	188.5
D.E.H.N.R. III	2767	206.6	12681	192.6	186.4
D.E.H.N.R. IV	2358	186.1	10932	178.7	186.4
D.E.H.N.R. V	1319	179.4	6095	168.8	191.9
D.E.H.N.R. VI	1291	204.7	6281	202.9	198.1
D.E.H.N.R. VII	909	190.8	4258	184.5	205.6
COUNTIES					
1 ALAMANCE	265	247.8	1137	217.4	183.4
2 ALEXANDER	47	167.6	181	132.8	150.2
3 ALLEGHANY	27	270.2	119	242.8	230.4
4 ANSON	48	183.1	254	193.6	171.4
5 ASHE	58	247.0	248	212.0	185.8
6 AVERY	32	206.4	136	179.2	335.5*
7 BEAUFORT	110	260.4	505	238.9	210.0
8 BERTIE	46	219.0	247	233.7	184.5
9 BLADEN	64	206.4	295	191.1	182.8
10 BRUNSWICK	112	217.3	533	217.1	204.4
11 BUNCOMBE	450	256.3	2019	235.2	199.9
12 BURKE	160	205.8	694	181.1	189.0
13 CABARRUS	197	202.5	958	202.4	187.1
14 CALDWELL	129	180.5	637	179.9	190.8
15 CAMDEN	10	160.7	65	217.6	195.2
16 CATARETT	135	262.3	577	230.1	223.3
17 CASWELL	47	211.7	199	178.8	163.0
18 CATANBAA	235	198.4	1063	183.9	191.6
19 CHATHAM	85	226.9	353	194.1	169.8
20 CHEROKEE	45	212.8	205	197.5	159.0
21 CHowan	41	301.8	207	307.4	224.8
22 CLAY	22	305.9	96	267.3	207.3*
23 CLEVELAND	179	204.0	858	198.1	188.0
24 COLUMBUS	107	203.0	512	195.1	184.1
25 CRAVEN	133	161.2	624	154.2	190.3
26 CUMBERLAND	366	138.9	1550	120.6	207.5
27 CURRITUCK	32	223.7	163	238.6	233.9
28 DARE	50	219.4	210	209.5	187.6
29 DAVIDSON	234	186.3	1115	181.7	185.0
30 DAVIE	47	168.5	272	198.8	211.4
31 DUPLIN	86	204.4	453	217.2	192.3
32 DURHAM	375	214.9	1645	195.2	200.8
33 EDGECOMBE	104	175.5	591	199.5	193.9
34 FURSYTH	555	208.1	2557	194.2	187.9
35 FRANKLIN	66	183.3	316	182.3	154.5
36 GASTON	339	194.6	1633	188.9	194.9
37 GATES	29	292.9	138	285.6	232.8
38 GRAHAM	12	169.1	80	225.0	166.2
39 GRANVILLE	195	266.2	370	193.8	165.7
40 GREENE	28	169.9	137	186.3	163.0
41 GUILFORD	725	213.8	3291	197.6	194.6

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
CANCER - ALL SITES CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	146	257.2	622	220.3	174.7
43 HARNETT	118	176.1	624	191.7	206.6
44 HAYWOOD	116	241.5	548	227.6	199.9
45 HENDERSON	196	278.5	882	259.2	192.9
46 HERTFORD	62	264.7	284	238.8	196.5
47 HOKE	47	193.8	179	152.1	195.9
48 HYDE	17	299.4	81	279.6	231.8
49 IREDELL	201	217.2	860	191.2	176.8
50 JACKSON	63	230.0	240	177.9	171.5
51 JOHNSTON	155	190.2	748	188.5	182.7
52 JONES	15	151.2	101	204.6	155.8
53 LEE	74	174.2	375	180.7	182.8
54 LENoir	123	205.0	620	205.7	187.6
55 LINCOLN	91	184.2	400	168.8	171.2
56 MCDOWELL	83	227.8	383	211.0	203.5
57 MACON	65	272.5	311	266.8	211.5
58 MADISON	31	178.6	175	202.5	240.9*
59 MARTIN	65	249.4	282	213.8	190.3
60 MECKLENBURG	790	162.6	3971	171.1	192.7
61 MITCHELL	29	198.4	161	220.9	136.5
62 MONTGOMERY	36	146.6	222	184.1	165.7
63 MOORE	151	251.3	753	261.5	196.0
64 NASH	158	214.8	712	197.3	193.6
65 NEW HANOVER	277	232.8	1272	219.5	229.3
66 NORTHAMPTON	50	227.5	267	239.2	186.7
67 ONSLOW	133	101.1	629	99.8	205.0
68 ORANGE	140	154.0	621	143.4	189.0
69 PAMLICO	24	219.1	134	244.9	199.8
70 PASQUOTANK	62	197.2	346	227.3	206.7
71 PENDER	59	210.8	282	215.2	187.1
72 PERQUIMANS	26	230.7	129	239.6	171.7
73 PERSON	68	216.4	304	196.5	176.7
74 PITTS	192	184.8	842	166.4	197.3
75 POLK	43	285.9	208	283.6	167.2
76 RANDOLPH	196	187.8	906	179.7	194.6
77 RICHMOND	120	261.3	498	217.4	190.8
78 RUBESON	201	186.7	918	171.5	192.4
79 RUCKINGHAM	206	238.8	901	209.8	194.4
80 RUWAN	271	250.9	1192	226.1	188.4
81 RUTHERFORD	121	207.8	588	204.6	173.8
82 SAMPSON	101	199.0	497	196.5	173.2
83 SCOTLAND	67	194.9	305	178.7	203.8
84 STANLY	109	210.3	528	206.0	186.6
85 STOKES	60	161.7	298	164.8	179.1
86 SURRY	120	192.1	609	197.3	177.3
87 SWAIN	21	190.5	121	226.0	187.3
88 TRANSYLVANIA	75	284.8	300	231.3	205.2
89 TYRKELL	10	238.3	45	218.0	173.3
90 UNION	149	172.5	693	169.0	197.0
91 VANCE	100	255.0	455	233.5	206.9
92 WAKE	540	134.9	2635	139.9	182.4
93 WARREN	49	295.1	234	283.2	194.3
94 WASHINGTON	29	199.9	165	226.7	222.2
95 WATAUGA	52	147.5	237	137.0	150.6
96 WAYNE	187	186.4	956	193.9	211.1
97 WILKES	105	171.7	483	158.2	151.1
98 WILSON	143	216.8	684	210.0	203.8
99 YADKIN	70	229.2	309	206.3	174.9
100 YANCEY	24	150.0	168	211.5	183.1

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## CANCER - ALL SITES

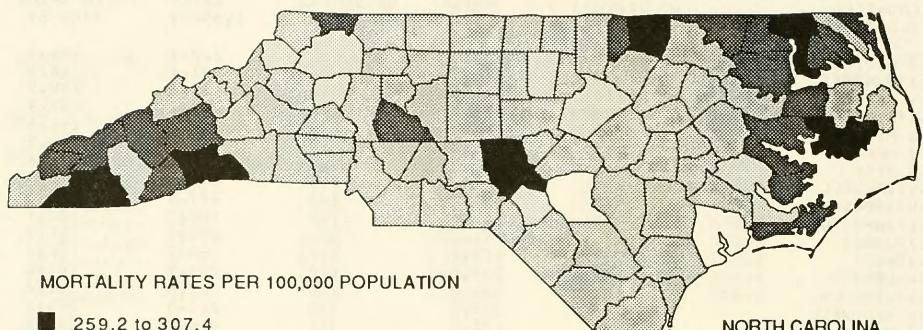


FIGURE 5.A

## CANCER - ALL SITES

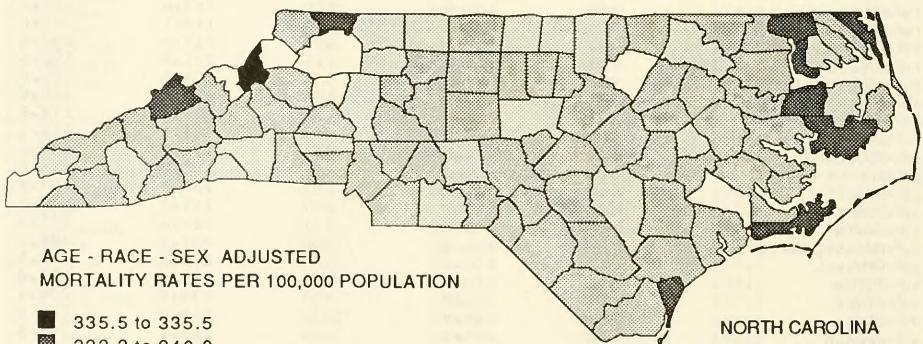


FIGURE 5.B

TABLE - 7

MORTALITY STATISTICS FOR 1989

NORTH CAROLINA RESIDENTS

CANCER - COLON, RECTUM AND ANUS

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	1349	20.5	6461	20.2	20.2
REGIONS					
D.E.H.N.R. I	187	25.3	868	23.8	20.9
D.E.H.N.R. II	276	20.0	1361	20.4	20.7
D.E.H.N.R. III	272	20.3	1316	20.0	19.4
D.E.H.N.R. IV	241	19.0	1123	16.4	19.1
D.E.H.N.R. V	130	17.7	609	16.9	18.9
D.E.H.N.R. VI	146	23.1	724	23.4	22.9
D.E.H.N.R. VII	97	20.4	460	19.9	22.6
COUNTIES					
1 ALAMANCE	28	26.2	128	24.5	20.5
2 ALEXANDER	5	17.8	27	19.8	24.2
3 ALLEGHANY	3	30.0	12	24.5	24.5*
4 ANSON	3	11.4	21	16.0	13.4
5 ASHE	3	12.8	21	18.0	20.1*
6 AVERY	4	25.8	17	22.4	54.8*
7 BEAUFORT	9	21.3	46	21.8	19.1
8 BERTIE	6	28.6	34	32.2	25.9
9 BLADEF	8	25.8	32	20.7	20.4
10 BRUNSWICK	7	13.6	50	20.4	19.9
11 BUNCOMBE	45	25.6	205	23.9	21.2
12 BURKE	14	18.0	67	17.5	17.4
13 CABARRUS	19	19.5	105	22.2	20.0
14 CALDWELL	11	15.4	62	17.5	17.5
15 CAMDEN	0	0.0	6	20.1	16.9
16 CARTERET	16	31.1	72	28.7	30.9
17 CASWELL	0	27.0	25	22.5	22.8
18 CATANBAA	31	26.2	126	21.8	22.4
19 CHATHAM	12	32.0	48	26.4	22.6
20 CHEROKEE	5	23.6	20	19.3	17.7
21 CHOWAN	11	81.0	29	43.1	31.2
22 CLAY	2	27.8	14	39.0	21.7
23 CLEVELAND	20	22.8	100	23.1	22.0
24 COLUMBUS	13	24.7	43	16.4	15.4
25 CRAVEN	12	14.5	64	15.8	19.6
26 CUMBERLAND	36	13.7	155	12.1	21.4
27 CURRITUCK	4	28.0	19	27.8	26.5
28 DARE	4	17.6	28	27.9	28.0
29 DAVIDSON	24	19.1	98	16.0	16.6
30 DAVIE	8	28.7	28	20.5	22.5
31 DUPLIN	10	23.8	40	19.2	16.6
32 DURHAM	37	21.2	185	22.0	21.8
33 EDGECOMBE	9	15.2	61	20.6	19.8
34 FORSYTH	59	22.1	268	20.4	19.5
35 FRANKLIN	8	22.2	37	21.3	16.9
36 GASTON	35	20.1	168	19.4	19.8
37 GATES	1	10.1	12	24.8	21.1
38 GRAHAM	1	14.1	7	19.7	12.7
39 GRANVILLE	3	7.6	33	17.3	15.7
40 GREENE	4	24.3	15	16.2	18.9
41 GUILFORD	75	22.1	364	21.9	21.4

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
CANCER - COLON, RECTUM AND ANUS CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	14	24.7	54	19.1	16.6
43 HARNETT	7	10.4	49	15.1	16.2
44 HAYWOOD	13	27.1	59	24.5	15.1
45 HENDERSON	23	32.7	113	33.2	21.2
46 HERTFORD	7	29.9	39	32.8	25.3
47 HOKE	6	24.7	17	14.4	17.7
48 HYDE	1	17.6	7	24.2	22.0
49 IREDELL	27	29.2	99	22.0	20.0
50 JACKSON	8	29.2	19	14.1	15.1
51 JOHNSTON	15	18.4	59	14.9	14.6
52 JONES	0	0.0	9	18.2	14.3
53 LEE	5	11.8	37	17.8	17.7
54 LENOIR	16	26.7	76	25.2	24.3
55 LINCOLN	15	30.4	50	21.1	20.6
56 MCDOWELL	8	22.0	44	24.2	25.7
57 MACON	5	21.0	42	36.0	18.7
58 MAISUN	2	11.5	13	15.0	9.0
59 MARTIN	8	30.7	36	27.3	24.6
60 MECKLENBURG	73	15.0	396	17.1	19.5
61 MITCHELL	4	27.4	18	24.7	15.0
62 MONTGOMERY	4	16.3	29	24.0	22.0
63 MOORE	14	23.3	80	27.8	20.0
64 NASH	8	10.9	56	15.5	14.7
65 NEW HANOVER	23	19.3	157	27.1	28.6
66 NORTHAMPTON	10	45.5	30	26.9	20.1
67 ONslow	19	14.4	70	11.1	25.4
68 ORANGE	13	14.3	64	14.8	19.9
69 PAMLICO	3	27.4	23	42.0	33.4
70 PASQUOTANK	8	25.5	43	28.3	25.3
71 PENDER	9	32.2	28	21.4	20.8
72 PERQUIMANS	3	26.6	20	37.2	25.8
73 PERSON	6	19.1	26	16.8	14.7
74 PITTS	22	21.2	87	17.4	19.6
75 POLK	8	53.2	30	40.9	22.6
76 RANDOLPH	18	17.2	110	21.8	24.3
77 RICHMOND	21	45.7	56	24.4	21.9
78 ROBESON	14	13.0	89	16.6	16.8
79 ROCKINGHAM	17	19.7	79	18.4	17.3
80 ROWAN	35	32.4	150	28.4	23.7
81 RUTHERFORD	19	32.6	72	25.1	23.5
82 SAMPSON	12	23.0	54	21.4	18.9
83 SCOTLAND	5	14.5	27	15.8	15.9
84 STANLY	8	15.4	62	24.4	21.2
85 STOKES	4	10.8	23	12.7	13.4
86 SURRY	7	11.2	57	18.5	15.9
87 SWAIN	5	45.3	18	33.6	29.5
88 TRANSYLVANIA	3	30.4	32	24.7	21.8
89 TYRKELL	2	47.7	8	38.8	28.7
90 UNION	8	9.3	78	19.0	21.4
91 VANCE	14	35.7	55	28.2	23.5
92 WAKE	61	15.2	299	15.9	20.9
93 WARREN	9	54.2	22	26.6	13.3
94 WASHINGTON	2	13.8	18	24.7	21.8
95 WATAUGA	7	19.9	22	12.7	12.1
96 WAYNE	23	22.9	105	21.3	23.3
97 WILKES	12	19.6	55	18.0	16.2
98 WILSON	17	25.8	57	17.5	18.0
99 YAUKN	1	3.3	26	17.4	13.7
100 YANCEY	2	12.5	16	20.1	12.9

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## CANCER - COLON, RECTUM AND ANUS

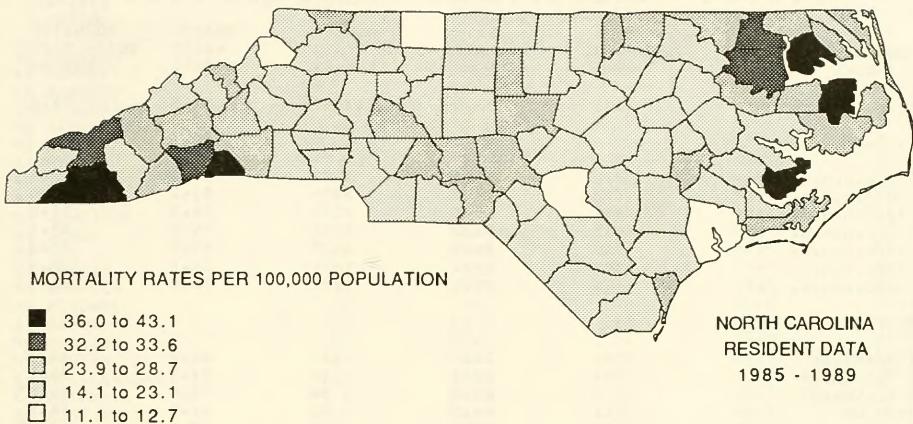


FIGURE 6.A

## CANCER - COLON, RECTUM AND ANUS

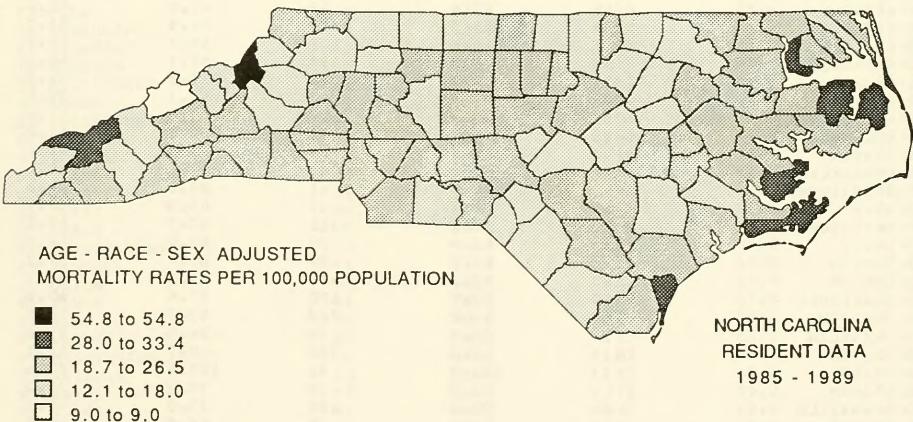


FIGURE 6.B

T A B L E - 8

M O R T A L I T Y S T A T I S T I C S F O R 1 9 8 9

N O R T H C A R O L I N A R E S I D E N T S

C A N C E R - T R A C H E A , B R O N C H U S A N D L U N G

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	3843	58.5	17246	53.8	53.8
<b>REGIONS</b>					
D.E.H.N.R. I	498	67.3	2177	59.7	49.9
D.E.H.N.R. II	770	55.8	3554	53.2	53.6
D.E.H.N.R. III	831	62.1	3574	54.3	52.0
D.E.H.N.R. IV	663	52.3	3026	49.5	53.7
D.E.H.N.R. V	399	54.3	1803	49.9	58.3
D.E.H.N.R. VI	399	63.3	1824	58.9	59.3
D.E.H.N.R. VII	283	59.4	1288	55.8	61.7
<b>COUNTIES</b>					
1 ALAMANCE	84	78.5	337	64.4	53.2
2 ALEXANDER	9	32.1	43	31.5	30.4
3 ALLEGHANY	6	60.0	36	73.4	66.6*
4 ANSON	17	64.8	80	61.0	55.5
5 ASHE	14	59.6	58	49.6	47.4*
6 AVERY	14	90.3	52	68.5	52.8
7 BEAUFORT	40	94.7	150	71.0	64.2
8 BERTIE	14	66.6	62	58.6	49.7
9 BLADEN	15	48.4	82	53.1	49.7
10 BRUNSWICK	41	79.6	184	74.9	67.3
11 BUNCOMBE	127	72.3	563	65.6	55.2
12 BURKE	51	65.6	207	54.0	54.5
13 CABARRUS	56	57.6	267	56.4	51.8
14 CALDWELL	36	53.2	181	51.1	47.4
15 CAMDEN	6	96.4	23	77.0	67.4
16 CARTERET	42	81.6	183	73.0	65.6
17 CASWELL	15	67.6	53	47.6	42.6
18 CATAWBA	69	58.3	315	54.5	53.2
19 CHATHAM	15	40.0	101	55.5	49.5
20 CHEROKEE	8	37.8	53	51.1	48.3
21 CHowan	7	51.5	48	71.3	54.3
22 CLAY	5	69.5	18	50.1	28.4
23 CLEVELAND	62	70.6	237	54.7	51.4
24 COLUMBUS	40	75.9	170	64.8	63.0
25 CRAVEN	43	52.1	166	41.0	51.8
26 CUMBERLAND	119	45.2	502	39.1	68.6
27 CURRITUCK	13	90.9	61	89.3	84.6
28 DARE	16	70.2	67	66.8	63.4
29 DAVIDSON	73	58.1	311	50.7	49.3
30 DAVIE	13	46.6	60	43.9	46.3
31 DUPLIN	26	61.8	128	61.4	55.2
32 DURHAM	100	57.3	432	51.3	57.9
33 EDGECOMBE	40	67.5	170	57.4	60.6
34 FORSYTH	158	59.2	707	53.7	52.5
35 FRANKLIN	21	58.3	98	56.5	51.6
36 GASTON	119	68.3	525	60.7	62.1
37 GATES	13	1314.3	51	105.5	80.6
38 GRAHAM	3	42.3	25	70.3	51.3
39 GRANVILLE	36	91.3	105	55.0	48.5
40 GREENE	9	54.6	49	59.5	65.7
41 GUILFORD	225	66.4	934	56.1	55.5

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
CANCER - TRACHEA, BRONCHUS AND LUNG CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	41	72.2	170	60.2	54.7
43 HARNETT	43	64.2	176	54.1	58.6
44 HAYWOOD	32	66.6	151	62.7	43.8
45 HENDERSON	60	85.3	225	66.1	52.8
46 HERTFORD	17	72.6	81	68.1	64.0
47 HÜKE	12	49.5	62	52.7	71.7
48 HYDE	5	88.1	23	79.4	67.3
49 IREDELL	53	57.3	231	51.4	45.7
50 JACKSON	15	54.8	59	43.7	41.1
51 JOHNSTON	47	57.7	231	58.2	55.6
52 JONES	5	50.4	28	56.7	42.4
53 LEE	28	65.9	117	56.4	57.4
54 LENJIR	33	55.0	187	62.0	57.3
55 LINCOLN	30	60.7	114	48.1	51.3
56 MCDOWELL	26	71.4	118	65.0	58.3
57 MACON	20	83.9	71	60.9	44.8
58 MAISDON	14	80.7	51	59.0	62.0*
59 MARTIN	24	92.1	84	63.7	61.8
60 MECKLENBURG	238	49.0	1184	51.0	58.2
61 MITCHELL	8	54.7	44	60.4	36.9
62 MONTGOMERY	10	40.7	56	46.4	42.2
63 MOORE	40	66.6	222	77.1	57.2
64 NASH	43	58.5	192	53.2	53.3
65 NEW HANOVER	82	68.9	356	61.4	64.1
66 NORTHAMPTON	10	45.5	56	50.2	40.3
67 ONSLOW	41	31.2	194	30.8	61.4
68 ORANGE	43	47.3	165	38.1	51.3
69 PAMLICO	10	91.3	46	84.1	67.3
70 PASQUOTANK	20	63.6	110	72.3	69.0
71 PENDER	11	39.3	73	55.7	47.7
72 PERQUIJAMANS	6	53.2	31	57.6	45.4
73 PERSON	21	66.8	91	58.8	53.9
74 PITTS	54	52.0	230	46.0	56.1
75 POLK	8	53.2	43	58.6	36.1
76 RANDOLPH	56	53.7	252	50.0	48.9
77 RICHMOND	33	71.9	139	60.7	54.2
78 ROBESON	65	60.4	276	51.6	63.7
79 RUCKINGHAM	73	84.6	267	62.2	57.8
80 ROWAN	67	62.0	300	56.9	46.3
81 RUTHERFORD	29	49.8	152	52.9	45.1
82 SAMPSON	27	53.2	140	55.4	50.3
83 SCOTLAND	18	52.3	68	39.8	48.3
84 STANLY	22	42.4	136	53.6	49.1
85 STOKES	19	51.2	95	52.5	60.5
86 SURRY	40	64.0	196	63.5	56.4
87 SWAIN	6	54.4	29	54.2	49.5
88 TRANSYLVANIA	25	94.9	84	64.8	53.3
89 TYKRELL	1	23.8	13	63.0	59.8
90 UNION	45	52.1	202	49.3	57.7
91 VANCE	31	79.0	132	67.8	66.6
92 WAKE	134	33.5	730	38.8	51.6
93 WARREN	11	66.2	55	66.6	56.7
94 WASHINGTON	6	41.4	43	59.1	53.8
95 WATAUGA	13	36.9	61	35.3	44.1
96 WAYNE	57	56.8	271	55.0	62.0
97 WILKES	21	34.3	130	42.6	43.3
98 WILSON	42	63.7	181	55.6	56.8
99 YADKIN	21	68.8	77	51.4	43.8
100 YANCEY	9	56.2	51	64.2	42.7

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## CANCER - TRACHEA, BRONCHUS AND LUNG

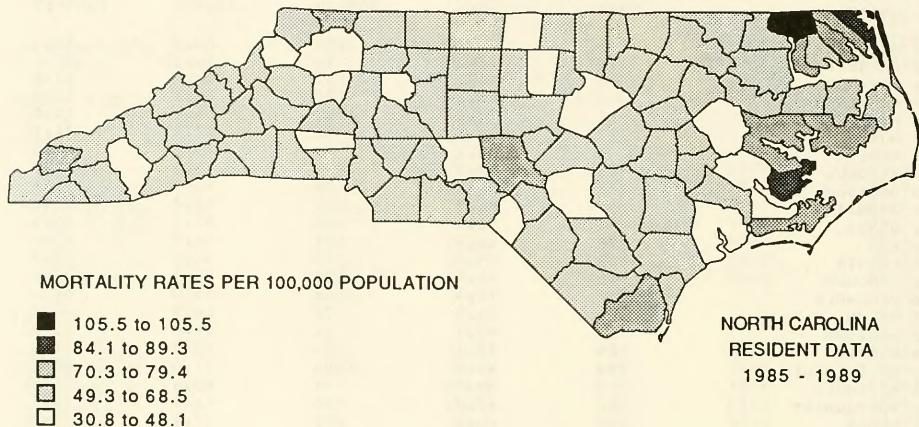


FIGURE 7.A

## CANCER - TRACHEA, BRONCHUS AND LUNG

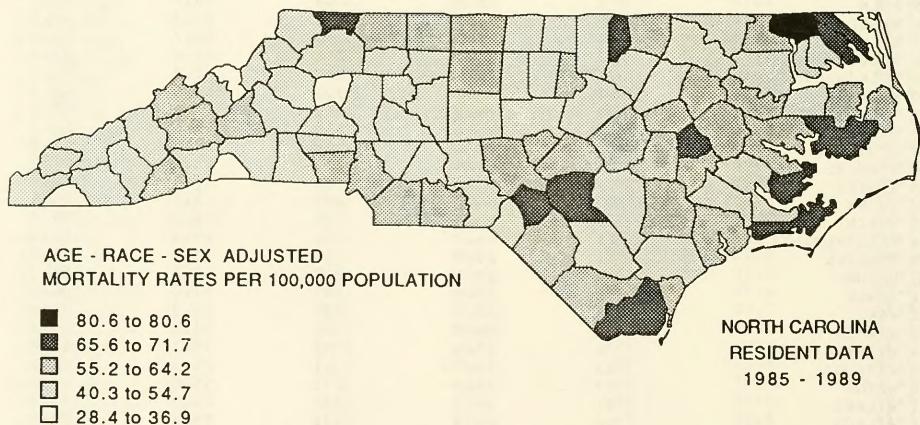


FIGURE 7.B

TABLE - 9  
MORTALITY STATISTICS FOR 1989

NORTH CAROLINA RESIDENTS

CANCER - BREAST - FEMALE

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE# 1989	NUMBER OF DEATHS 1985-89	DEATH RATE# 1985-89	ADJUSTED DEATH RATE# 1985-89
NORTH CAROLINA	1099	32.2	5288	31.9	31.9
<b>REGIONS</b>					
D.E.H.N.R. I	123	31.9	644	34.0	29.2
D.E.H.N.R. II	234	32.5	1157	33.2	33.1
D.E.H.N.R. III	240	34.2	1126	32.7	31.8
D.E.H.N.R. IV	208	31.4	980	30.7	31.7
D.E.H.N.R. V	105	28.0	530	28.8	32.8
D.E.H.N.R. VI	119	36.2	530	32.9	32.0
D.E.H.N.R. VII	70	29.9	321	28.3	30.4
<b>COUNTIES</b>					
1 ALAMANCE	17	29.9	88	31.7	27.7
2 ALEXANDER	2	14.2	11	16.0	17.9
3 ALLEGHANY	3	58.0	10	39.4	26.1
4 ANSON	2	14.1	20	28.4	27.5
5 ASHE	0	0.0	16	26.5	18.4
6 AVERY	1	12.7	11	28.7	22.8
7 BEAUFORT	6	26.9	38	34.1	31.2
8 BERTIE	3	26.7	18	31.9	26.8
9 BLADEF	9	55.6	24	29.8	31.0
10 BRUNSWICK	9	34.0	34	27.0	27.4
11 BUNCOMBE	39	42.0	161	35.5	29.1
12 BURKE	11	27.5	64	32.5	35.6
13 CABARRUS	20	39.3	106	42.9	39.4
14 CALDWELL	10	27.3	52	28.7	32.4
15 CAMDEN	1	31.4	7	45.7	38.3
16 CARTERET	13	50.1	47	37.2	36.4
17 CASWELL	4	35.3	12	21.2	19.7
18 CATANBIA	24	39.1	97	32.4	32.2
19 CHATHAM	9	46.7	25	26.8	25.2
20 CHEROKEE	6	54.3	19	35.1	30.9
21 CHOWAN	6	81.2	21	57.6	49.1
22 CLAY	1	27.6	9	49.7	34.3
23 CLEVELAND	12	26.1	77	34.0	31.6
24 COLUMBUS	4	14.4	36	26.1	26.2
25 CRAVEN	10	24.6	52	26.1	31.4
26 CUMBERLAND	30	23.4	144	23.1	33.5
27 CURRITUCK	4	57.1	12	35.9	34.3
28 DARE	3	26.1	17	33.7	28.0
29 DAVIDSON	20	30.8	106	33.5	35.3
30 DAVIE	4	28.2	30	43.1	51.8
31 DUPLIN	8	36.1	31	28.3	26.4
32 DURHAM	30	32.0	151	33.4	33.5
33 EDGECOMBE	6	18.6	52	32.4	32.9
34 FORSYTH	44	31.0	232	33.2	32.1
35 FRANKLIN	9	47.6	29	31.9	28.1
36 GASTON	25	27.3	114	25.1	24.6
37 GATES	3	60.0	9	36.9	33.9
38 GRAHAM	0	0.0	2	11.1	8.3
39 GRANVILLE	10	50.2	25	26.0	21.5
40 GREENE	5	58.9	13	30.7	31.5
41 GUILFORD	69	38.3	290	32.8	32.3

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
CANCER - BREAST - FEMALE CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	16	53.0	54	36.5	28.4
43 HARNETT	9	26.1	59	35.3	37.8
44 HAYWOOD	13	52.1	51	40.8	40.4
45 HENDERSON	13	35.3	83	46.6	34.5
46 HERTFORD	7	56.7	24	38.4	30.1
47 HOKE	4	31.7	11	18.1	26.7
48 HYDE	2	68.6	6	40.3	31.8
49 IREDELL	16	33.3	89	38.1	35.6
50 JACKSON	5	35.1	22	31.5	31.4
51 JOHNSTON	7	16.5	50	24.2	22.8
52 JONES	1	18.5	10	37.4	25.4
53 LEE	7	31.3	32	29.3	29.6
54 LENOIR	11	34.4	51	31.8	29.1
55 LINCOLN	10	39.5	37	30.5	32.4
56 MCDOWELL	3	15.9	14	14.9	14.3
57 MACON	5	40.2	24	39.6	23.1
58 MADISON	3	34.1	15	34.2	25.7
59 MARTIN	7	50.3	23	32.8	32.1
60 MECKLENBURG	75	29.5	411	33.8	36.9
61 MITCHELL	2	26.6	11	29.4	20.6
62 MONTGOMERY	4	31.9	25	40.6	37.5
63 MOORE	15	48.0	76	50.8	41.2
64 NASH	18	46.2	74	38.8	37.2
65 NEW HANOVER	22	35.2	101	33.1	34.4
66 NORTHAMPTON	2	17.8	25	43.8	32.9
67 ONSLOW	8	14.6	46	17.6	26.6
68 ORANGE	13	27.3	50	22.0	29.9
69 PAMLICO	2	34.9	5	17.5	16.8
70 PASQUOTANK	6	36.4	23	28.9	26.9
71 PENDER	6	41.6	26	38.6	35.8
72 PERQUIMANS	2	33.5	9	31.6	24.5
73 PERSON	7	42.5	29	35.8	32.0
74 PITTS	17	30.7	82	30.8	36.0
75 POLK	2	25.2	13	33.7	19.4
76 RANDOLPH	25	46.3	93	35.7	38.6
77 RICHMOND	8	33.2	39	32.5	29.2
78 ROBESON	18	31.5	67	23.6	28.8
79 RUCKINGHAM	21	46.6	85	37.9	35.1
80 ROWAN	22	39.2	97	35.4	31.0
81 RUTHERFORD	5	16.3	44	29.2	22.8
82 SAMPSON	5	18.8	39	29.5	26.2
83 SCOTLAND	1	5.5	26	29.0	34.8
84 STANLY	12	44.3	51	38.5	37.9
85 STOKES	5	26.2	24	25.9	23.7
86 SURRY	13	40.0	54	33.7	30.7
87 SWAIN	0	0.0	4	14.2	13.4
88 TRANSYLVANIA	4	29.5	32	48.2	41.6
89 TYRRELL	1	44.7	6	54.6	47.5
90 UNION	16	36.0	67	31.8	35.4
91 VANCE	5	24.2	39	38.0	38.2
92 WAKE	55	26.8	261	27.1	32.5
93 WARREN	3	34.1	20	45.9	33.3
94 WASHINGTON	3	39.5	13	34.2	27.4
95 WATAUGA	4	22.2	32	36.1	35.0
96 WAYNE	19	36.3	91	35.5	35.4
97 WILKES	7	22.3	26	16.6	15.9
98 WILSON	11	31.2	64	36.8	37.1
99 YADKIN	4	25.7	28	36.7	27.3
100 YANCEY	0	0.0	13	31.8	57.1

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## CANCER - FEMALE BREAST

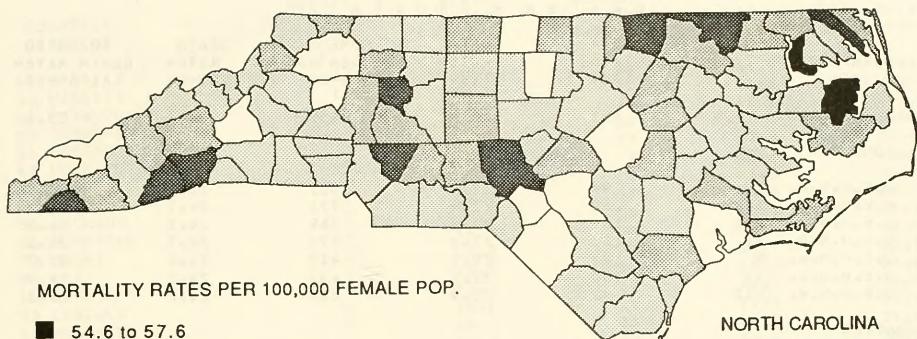


FIGURE 8.A

## CANCER - FEMALE BREAST

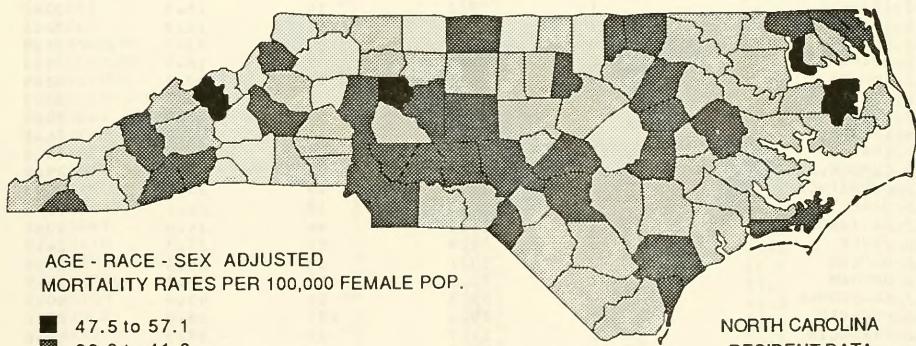


FIGURE 8.B

TABLE - 10  
MORTALITY STATISTICS FOR 1989  
NORTH CAROLINA RESIDENTS

CANCER - PROSTATE

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	891	28.2	3959	25.6	25.6
REGIONS					
D.E.H.N.R. I	99	27.9	502	28.7	24.1
D.E.H.N.R. II	182	27.6	773	24.1	26.3
D.E.H.N.R. III	165	25.9	769	24.5	24.9
D.E.H.N.R. IV	191	31.6	779	26.7	26.1
D.E.H.N.R. V	101	28.1	419	23.6	25.7
D.E.H.N.R. VI	100	33.2	433	29.2	24.9
D.E.H.N.R. VII	53	21.9	284	24.2	28.1
COUNTIES					
1 ALAMANCE	19	37.9	68	27.7	24.5
2 ALEXANDER	6	43.1	15	22.2	23.0
3 ALLEGHANY	0	0.0	8	33.8	18.1
4 ANSON	7	58.0	21	34.6	25.5
5 ASHE	7	61.6	27	47.7	26.2
6 AVÉRY	0	0.0	5	13.3	10.1
7 BEAUFORT	4	20.1	26	26.1	19.7
8 BERTIE	9	51.2	18	36.5	25.4
9 BLADEN	5	33.7	24	32.5	26.2
10 BRUNSWICK	4	16.0	32	26.7	24.5
11 BUNCOMBE	31	37.4	129	31.8	26.1
12 BURKE	8	21.2	32	17.2	16.2
13 CABARRUS	14	30.1	37	16.4	15.4
14 CALDWELL	10	28.7	40	23.2	32.6
15 CAMDEN	0	0.0	2	13.7	10.5
16 CARTERET	8	31.3	39	31.3	35.7
17 CASWELL	1	9.2	14	25.7	20.8
18 CATAWBA	17	29.8	51	18.3	22.1
19 CHATHAM	9	49.5	30	33.9	25.9
20 CHEROKEE	2	19.8	9	18.1	9.3
21 CHOWAN	6	96.8	31	100.3	52.9
22 CLAY	3	84.1	5	28.1	12.9
23 CLEVELAND	19	45.5	66	32.0	30.6
24 COLUMBUS	4	16.0	39	31.3	26.2
25 CRAVEN	12	28.7	29	14.1	18.5
26 CUMBERLAND	29	21.5	94	14.2	29.9
27 CURRITUCK	1	13.7	10	28.7	29.5
28 DARE	3	26.5	13	26.1	18.2
29 DAVIDSON	14	23.1	44	14.8	20.8
30 DAVIE	3	21.9	17	25.3	24.9
31 DUPLIN	6	30.1	34	34.3	26.6
32 DURHAM	27	33.5	112	28.7	25.9
33 EDGECOMBE	9	33.3	59	43.4	40.4
34 FORSYTH	37	29.6	173	28.0	27.2
35 FRANKLIN	2	11.7	23	27.9	19.6
36 GASTON	14	16.9	86	20.9	25.3
37 GATES	1	20.4	7	29.2	10.8
38 GRAHAM	2	56.8	11	62.4	32.4
39 GRANVILLE	9	46.0	27	28.5	17.7
40 GREENE	0	0.0	5	12.5	6.9
41 GUILFORD	37	23.3	192	24.5	24.4

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
CANCER - PROSTATE CNT'D.

COUNTIES (CONT'D)	NUMBER DF DEATHS 1989	DEATH RATE* 1989	NUMBER DF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	13	48.3	56	41.7	25.7
43 HARNETT	11	33.8	51	32.2	35.7
44 HAYWOOD	4	17.3	26	22.4	24.3
45 HENDERSON	10	29.8	60	37.0	36.6
46 HERTFORD	4	36.1	27	47.8	29.5
47 HOKE	0	0.0	7	12.3	14.8
48 HYDE	3	108.5	9	63.8	46.5*
49 IREDELL	11	24.7	57	26.3	24.7
50 JACKSON	2	15.2	16	24.6	20.4
51 JOHNSTON	14	35.9	58	30.5	30.9
52 JONES	2	44.3	9	39.7	20.7
53 LEE	4	19.9	18	18.3	18.0
54 LENOIR	8	28.6	32	22.7	20.0
55 LINCOLN	4	16.6	16	13.8	14.4
56 MCDOWELL	7	39.7	23	26.2	27.5
57 MACON	3	26.3	30	53.6	56.2*
58 MADISON	1	11.7	17	40.0	67.1*
59 MARTIN	7	57.6	22	35.6	23.9
60 MECKLENBURG	53	22.9	260	23.5	28.2
61 MITCHELL	1	14.1	8	22.6	12.2
62 MONTGOMERY	2	16.7	11	18.6	16.1
63 MOORE	19	65.9	51	36.9	24.4
64 NASH	5	14.4	39	22.9	22.2
65 NEW HANOVER	16	28.4	73	26.6	28.6
66 NORTHAMPTON	7	65.2	18	33.0	22.2
67 ONDOW	10	13.0	41	11.1	33.0
68 ORANGE	13	30.1	44	21.4	25.6
69 PAMLICO	0	0.0	6	23.0	15.3
70 PASQUOTANK	6	40.2	29	40.0	30.8
71 PENDER	5	36.9	26	40.8	29.9
72 PERQUIMANS	2	37.8	11	43.4	20.6
73 PERSON	4	26.8	22	29.8	24.4
74 PITTS	20	41.2	64	27.4	28.1
75 POLK	1	14.1	16	46.1	25.7
76 RANDOLPH	14	27.8	56	22.9	28.4
77 RICHMOND	6	27.4	35	32.1	24.9
78 ROBESON	14	27.7	66	26.2	19.7
79 ROCKINGHAM	9	21.9	55	26.8	24.8
80 ROWAN	21	40.5	97	38.3	31.2
81 RUTHERFORD	7	25.4	38	27.8	22.1
82 SAMPSON	4	16.5	31	25.7	18.9
83 SCOTTANO	4	24.5	28	34.6	36.4
84 STANLY	7	28.3	33	27.2	26.6
85 STOKES	3	16.6	16	18.2	20.9
86 SURRY	7	23.4	32	21.6	19.7
87 SWAIN	2	38.5	7	27.6	17.2
88 TRANSYLVANIA	3	23.4	16	25.3	14.8
89 TYRRELL	0	0.0	1	10.4	5.3
90 UNION	16	38.2	55	27.6	33.1
91 VANCE	0	43.1	46	49.8	34.7
92 WAKE	46	23.6	158	17.2	25.3
93 WARREN	7	89.6	26	66.6	35.2
94 WASHINGTON	3	43.4	12	34.4	30.7
95 WATAUGA	2	11.6	10	11.8	10.1
96 WAYNE	13	27.1	70	29.5	31.2
97 WILKES	8	26.8	29	19.5	21.7
98 WILSON	14	45.7	43	28.3	23.0
99 YADKIN	4	26.7	28	38.1	44.5
100 YANCEY	2	25.8	14	36.3	20.4

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## CANCER - PROSTATE

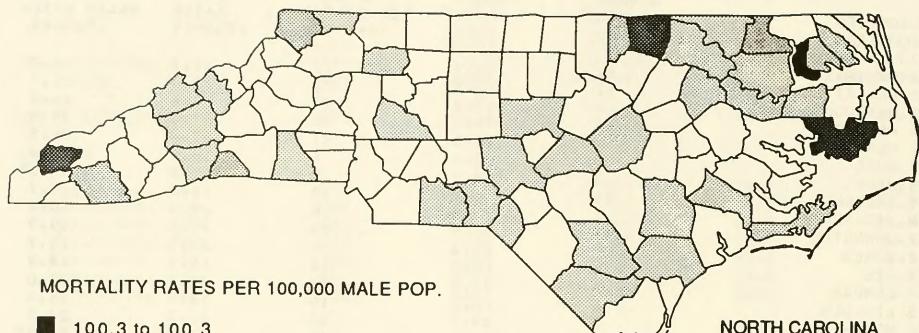


FIGURE 9.A

## CANCER - PROSTATE

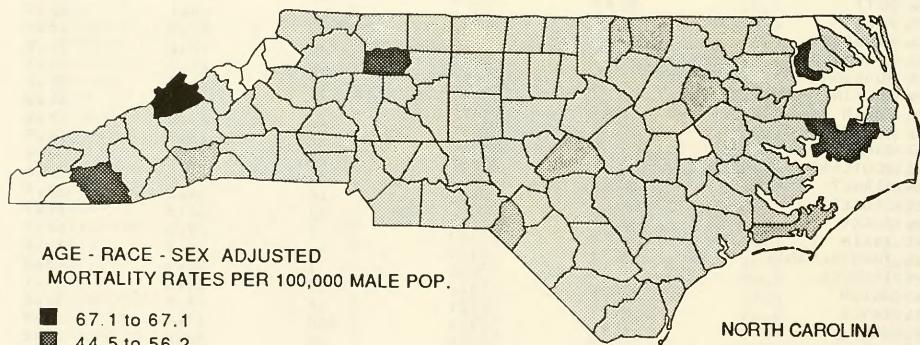


FIGURE 9.B

T A B L E - 1 1

M O R T A L I T Y S T A T I S T I C S F O R 1 9 8 9

N O R T H C A R O L I N A R E S I D E N T S

S E P T I C E M B E R

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	526	8.0	2902	9.1	9.1
<b>REGIONS</b>					
I	63	8.5	310	8.5	7.2
II	90	6.5	495	7.4	8.0
III	128	9.6	661	10.0	10.1
IV	95	7.5	648	10.6	10.5
V	52	7.1	301	8.3	9.3
VI	75	11.9	317	10.2	9.6
VII	23	4.8	170	7.4	8.4
<b>COUNTIES</b>					
1 ALAMANCE	11	10.3	54	10.3	9.2
2 ALEXANDER	1	3.6	9	6.6	8.3
3 ALLEGHANY	2	20.0	6	12.2	35.7*
4 ANSON	1	3.8	13	9.9	7.1
5 ASHE	3	12.8	13	11.1	6.9
6 AVERY	0	0.0	5	6.6	5.1
7 BEAUFORT	13	30.8	29	13.7	11.5
8 BERTIE	4	19.0	12	11.4	7.7
9 BLADEN	4	12.9	23	14.9	12.2
10 BRUNSWICK	4	7.8	15	6.1	6.0
11 BUNCOMBE	10	5.7	77	9.0	7.8
12 BURKE	2	2.6	19	5.0	5.2
13 CABARRUS	6	6.2	41	8.7	8.6
14 CALDWELL	5	7.0	20	5.6	6.7
15 CAMDEN	1	16.1	3	10.0	11.3
16 CARTERET	3	5.8	14	5.6	4.7
17 CASWELL	1	4.5	5	4.5	6.0
18 CATAWBA	9	7.6	41	7.1	7.5
19 CHATHAM	4	10.7	21	11.5	9.7
20 CHEROKEE	4	18.9	16	15.4	13.9
21 CHowan	2	14.7	7	10.4	8.1
22 CLAY	1	13.9	1	2.8	2.3
23 CLEVELAND	8	9.1	39	9.0	8.7
24 COLUMBUS	5	9.5	43	16.4	14.9
25 CRAVEN	7	8.5	36	8.9	11.4
26 CUMBERLAND	19	7.2	76	5.9	11.3
27 CURRITUCK	2	14.0	7	10.2	9.3
28 DARE	0	0.0	9	9.0	10.3
29 DAVIDSON	6	4.8	39	6.4	7.1
30 DAVIE	0	0.0	14	10.2	10.9
31 DUPLIN	1	2.4	19	9.1	7.8
32 DURHAM	17	9.7	114	13.5	11.9
33 EDGECOMBE	6	10.1	29	9.8	8.3
34 FORSYTH	36	13.5	175	13.3	12.5
35 FRANKLIN	2	5.6	22	12.7	8.7
36 GASTON	15	8.6	64	7.4	7.7
37 GATES	1	10.1	8	16.6	9.6
38 GRAHAM	0	0.0	5	14.1	21.1*
39 GRANVILLE	4	10.1	28	14.7	11.2
40 GREENE	0	0.0	5	6.1	4.6
41 GUILFORD	16	4.7	122	7.3	7.2

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
SEPTICEMIA CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE*	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	4	7.0	38	13.5	9.8
43 HARNETT	3	4.5	21	6.5	7.0
44 HAYWOOD	4	8.3	20	8.3	4.9
45 HENDERSON	5	7.1	22	6.5	8.9
46 HERTFORD	4	17.1	18	15.1	10.4
47 HOKE	1	4.1	8	6.8	7.7
48 HYDE	1	17.6	2	6.9	7.4*
49 IREDELL	8	8.6	39	8.7	8.7
50 JACKSON	6	21.9	16	11.9	9.1
51 JOHNSTON	4	4.9	33	8.3	8.1
52 JONES	2	20.2	8	16.2	10.0
53 LEE	1	2.4	16	7.7	7.9
54 LENOIR	4	6.7	30	10.0	9.8
55 LINCOLN	3	6.1	10	4.2	5.5
56 McDOWELL	2	5.2	14	7.7	6.9
57 MACON	8	33.5	18	15.4	8.2
58 MADISON	4	23.1	19	22.0	13.5
59 MARTIN	2	7.7	15	11.4	8.3
60 MECKLENBURG	27	5.6	179	7.7	8.3
61 MITCHELL	3	20.5	12	16.5	9.3
62 MONTGOMERY	2	8.1	14	11.6	10.6
63 MOORE	5	8.3	24	8.3	6.5
64 NASH	4	5.4	34	9.4	10.1
65 NEW HANOVER	3	2.5	51	8.8	9.1
66 NORTHAMPTON	3	13.7	18	16.1	10.5
67 ONSLOW	6	4.6	24	3.8	8.7
68 ORANGE	5	5.5	44	10.2	13.3
69 PAMLICO	3	27.4	7	12.8	11.0
70 PASQUOTANK	5	15.9	8	5.3	4.6
71 PENDER	1	3.6	4	3.1	3.6
72 PERQUIMANS	1	8.9	6	11.1	7.6
73 PERSON	3	9.5	14	9.0	7.1
74 PITI	10	9.6	51	10.2	9.6
75 POLK	0	0.0	5	6.8	4.4
76 RANDOLPH	8	7.7	36	7.1	8.5
77 RICHMOND	2	4.4	29	12.7	11.8
78 ROBESON	7	6.5	41	7.7	7.1
79 ROCKINGHAM	7	8.1	52	12.1	11.3
80 ROWAN	5	4.6	36	6.8	5.8
81 RUTHERFORD	3	5.2	21	7.3	5.9
82 SAMPSON	3	5.9	31	12.3	10.2
83 SCOTLAND	5	14.5	21	12.3	13.6
84 STANLY	4	7.7	17	6.7	6.4
85 STOKES	6	16.2	20	11.1	14.8
86 SURRY	8	12.8	42	13.6	11.7
87 SWAIN	2	18.1	6	11.2	7.7
88 TRANSYLVANIA	2	7.6	7	5.4	3.5
89 TYRRELL	1	23.8	2	9.7	15.3
90 UNION	4	4.6	20	4.9	5.9
91 VANCE	10	25.5	38	19.5	17.0
92 WAKE	21	5.2	155	8.2	10.9
93 WARREN	1	6.0	20	24.2	14.9
94 WASHINGTON	1	6.9	10	13.7	13.1
95 WATAUGA	3	8.5	16	9.2	8.4
96 WAYNE	11	11.0	44	8.9	9.9
97 WILKES	4	6.5	35	11.5	9.8
98 WILSON	6	9.1	24	7.4	7.4
99 YADKIN	17	55.7	32	21.4	16.6
100 YANCEY	2	12.5	7	8.8	5.1

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

TABLE - 12  
MORTALITY STATISTICS FOR 1989  
NORTH CAROLINA RESIDENTS

DIABETES MELLITUS

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	1372	20.9	5539	17.3	17.3
<b>REGIONS</b>					
D.E.H.N.R.	1	169	22.8	671	18.4
D.E.H.N.R.	11	251	18.2	1103	16.5
D.E.H.N.R.	111	277	20.7	1148	17.4
D.E.H.N.R.	IV	264	20.8	1001	16.4
D.E.H.N.R.	V	168	22.8	638	17.7
D.E.H.N.R.	VI	154	24.4	624	20.2
D.E.H.N.R.	VII	89	18.7	354	15.3
<b>COUNTIES</b>					
1 ALAMANCE	37	34.6	129	24.7	21.2
2 ALEXANDER	4	14.3	12	8.8	14.2
3 ALLEGHANY	0	0.0	3	6.1	3.6
4 ANSON	8	30.5	23	17.5	11.3
5 ASHE	2	8.5	17	14.5	26.3*
6 AVERY	1	6.4	8	10.5	8.9
7 BEAUFORT	14	33.1	60	28.4	22.6
8 BERTIE	5	23.8	31	29.3	21.1
9 BLADEN	12	38.7	44	28.5	20.6
10 BRUNSWICK	7	13.6	32	13.0	13.0
11 BUNCOMBE	34	19.4	154	17.9	16.8
12 BURKE	15	19.3	68	17.7	21.3
13 CABARRUS	16	16.4	55	11.6	10.6
14 CALDWELL	17	23.8	75	21.2	25.3
15 CAMDEN	4	64.3	11	36.8	35.2
16 CARTERET	17	33.0	62	24.7	27.5
17 CASWELL	5	22.5	23	20.7	20.3
18 CATAWBA	18	15.2	98	17.0	20.0
19 CHATHAM	11	29.4	24	13.2	11.6
20 CHEROKEE	10	47.3	18	17.3	9.3
21 CHOWAN	2	14.7	13	19.3	11.5
22 CLAY	2	27.8	5	13.9	7.3
23 CLEVELAND	21	23.9	94	21.7	21.2
24 COLUMBUS	13	24.7	51	19.4	16.0
25 CRAVEN	13	15.8	43	10.6	12.8
26 CUMBERLAND	40	15.2	141	11.0	18.7
27 CURRITUCK	4	28.0	19	27.8	25.5
28 DARE	6	26.3	15	15.0	12.2
29 DAVIDSON	21	16.7	88	14.3	17.5
30 DAVIE	5	17.9	20	14.6	15.1
31 DUPLIN	12	28.5	46	22.1	17.9
32 DURHAM	33	21.8	141	16.7	15.4
33 EDGECOMBE	17	28.7	55	18.6	15.4
34 FORSYTH	55	20.6	276	21.0	20.0
35 FRANKLIN	7	19.4	31	17.9	11.8
36 GASTON	31	17.8	130	15.0	17.0
37 GATES	2	20.2	13	26.9	15.6
38 GRAHAM	0	0.0	1	2.8	15.7
39 GRANVILLE	2	5.1	37	19.4	14.8
40 GREENE	2	12.1	15	18.2	16.5
41 GUILFORD	72	21.2	285	17.1	16.8

\* SEE SECTION 11

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
DIABETES MELLITUS CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE# 1989	NUMBER OF DEATHS 1985-89	DEATH RATE# 1985-89	ADJUSTED DEATH RATE# 1985-89
42 HALIFAX	18	31.7	68	24.1	17.4
43 HARNETT	17	25.4	47	14.4	15.5
44 HAYWOOD	13	27.1	45	18.7	19.6
45 HENDERSON	9	12.8	48	14.1	14.3
46 HEREFORD	5	21.3	24	20.2	17.0
47 HOKE	5	20.6	19	16.1	13.4
48 HYDE	0	0.0	3	10.4	8.3
49 IREDELL	16	17.3	71	15.8	15.4
50 JACKSON	6	21.9	23	17.1	25.7
51 JOHNSTON	18	22.1	65	18.4	16.3
52 JONES	4	40.3	13	26.3	18.6
53 LEE	15	35.3	39	18.8	19.0
54 LENoir	15	25.0	60	19.9	16.1
55 LINCOLN	8	16.2	39	16.5	23.3
56 McDOWELL	9	24.7	33	18.2	21.3
57 MACON	7	29.4	23	19.7	10.0
58 MADISON	5	28.8	20	23.1	15.6
59 MARTIN	17	65.2	48	36.4	26.5
60 MECKLENBURG	76	15.6	375	16.2	17.8
61 MITCHELL	3	20.5	19	26.1	16.2
62 MONTGOMERY	7	28.5	19	15.8	13.9
63 MOORE	8	13.3	44	15.3	12.9
64 NASH	16	21.8	69	19.1	17.5
65 NEW HANOVER	18	15.1	98	16.9	17.4
66 NURTHAMPTON	8	36.4	26	23.3	12.0
67 UNSLOW	11	8.4	44	7.0	15.8
68 ORANGE	13	14.3	49	11.3	14.7
69 PAMLICO	2	18.3	7	12.8	8.7
70 PASQUOTANK	8	25.5	33	21.7	19.8
71 PENDER	11	39.3	21	16.0	13.0
72 PERQUIMANS	0	0.0	3	5.6	3.2
73 PERSON	6	19.1	29	18.7	16.0
74 PITTS	26	25.0	99	19.8	20.5
75 PULK	5	33.2	17	23.2	18.2
76 RANDOLPH	18	17.2	72	14.3	18.3
77 RICHMUND	19	41.4	63	27.5	24.1
78 ROBESON	34	31.6	150	28.0	27.8
79 ROCKINGHAM	21	24.3	76	17.7	16.6
80 RUWAN	27	25.0	99	18.8	17.1
81 RUTHERFORD	15	25.8	57	19.8	18.7
82 SAMPSON	5	9.9	44	17.4	14.3
83 SCUTLAND	13	37.8	44	25.8	23.7
84 STANLY	16	30.9	66	26.0	25.5
85 STUKES	8	21.6	22	12.2	12.7
86 SURRY	13	20.8	63	20.4	22.1
87 SWAIN	8	72.6	22	41.1	38.5
88 TRANSYLVANIA	6	22.8	19	14.6	24.3
89 TYRKELL	1	23.8	3	14.5	10.4
90 UNION	18	20.8	64	15.6	19.2
91 VANCE	10	25.5	45	23.1	19.5
92 WAKE	64	16.0	238	12.6	16.4
93 WARREN	3	18.1	10	12.1	7.1
94 WASHINGTON	3	20.7	11	15.1	11.4
95 WATAUGA	2	5.7	12	6.9	6.5
96 WAYNE	21	20.9	100	20.3	20.4
97 WILKES	11	18.0	42	13.8	16.8
98 WILSON	13	27.3	75	23.0	20.9
99 YADKIN	7	22.9	20	13.4	9.7
100 YANCEY	4	25.0	16	20.1	14.2

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

T A B L E - 1 3

M O R T A L I T Y S T A T I S T I C S F O R 1 9 8 9

N U R T H C A R O L I N A R E S I O N T S

P N E U M O N I A A N D I N F L U E N Z A

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	1900	28.9	9010	28.1	28.1
<b>REGIONS</b>					
D.E.H.N.R. I	294	39.7	1318	36.2	28.0
D.E.H.N.R. II	384	27.8	1808	27.0	27.7
D.E.H.N.R. III	391	29.2	1978	30.0	28.4
D.E.H.N.R. IV	334	26.4	1626	26.6	28.2
D.E.H.N.R. V	193	26.2	864	23.9	29.2
D.E.H.N.R. VI	204	32.3	895	28.9	29.5
D.E.H.N.R. VII	100	21.0	521	22.6	26.7
<b>COUNTIES</b>					
1 ALAMANCE	27	25.2	108	20.7	17.7
2 ALEXANDER	13	40.4	49	36.0	45.7
3 ALLEGHANY	8	80.1	41	83.6	46.3
4 ANSON	14	53.4	72	54.9	44.9
5 ASHE	8	34.1	36	30.8	17.7
6 AVERY	12	77.4	38	50.1	43.8
7 BEAUFORT	30	71.0	101	47.8	41.1
8 BERTIE	13	61.9	40	37.8	33.1
9 BLADEN	17	54.8	65	42.1	44.6
10 BRUNSWICK	11	21.3	74	30.1	31.2
11 BUNCOMBE	75	42.7	344	40.1	29.1
12 BURKE	20	25.7	87	22.7	25.0
13 CABARRUS	42	43.2	193	40.8	36.2
14 CALDWELL	19	26.6	92	26.0	29.7
15 CAMDEN	2	32.1	12	40.2	40.4
16 CARTERET	10	19.4	54	21.5	20.7
17 CASWELL	6	27.0	31	27.9	28.3
18 CATAWBA	29	24.5	155	26.8	30.0
19 CHATHAM	8	21.4	57	31.3	27.6
20 CHEROKEE	11	52.0	38	36.6	19.7
21 CHOWAN	6	44.2	38	56.4	38.3
22 CLAY	2	27.8	14	39.0	20.4
23 CLEVELAND	29	33.0	118	27.2	25.4
24 COLUMBUS	19	36.0	106	40.4	39.0
25 CRAVEN	23	27.9	69	17.1	24.7
26 CUMBERLAND	33	12.5	170	13.2	27.0
27 CURRITUCK	2	14.0	19	27.8	27.6
28 DARE	3	13.2	26	25.9	26.8
29 DAVIDSON	25	19.9	150	24.4	24.8
30 DAVIE	14	50.2	42	30.7	32.5
31 DUPLIN	12	28.5	52	24.9	22.9
32 DURHAM	49	28.1	237	28.1	27.5
33 EDGECOMBE	22	37.1	108	36.5	32.9
34 FORSYTH	68	25.5	389	29.5	27.8
35 FRANKLIN	10	27.8	45	26.0	20.8
36 GASTON	57	32.7	242	28.0	30.0
37 GATES	1	10.1	16	33.1	29.5
38 GRAHAM	4	56.4	12	33.7	73.5*
39 GRANVILLE	17	43.1	75	39.3	36.0
40 GREENE	7	42.5	19	23.1	24.0
41 GUILFORD	97	28.6	522	31.3	29.5

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
PNEUMONIA AND INFLUENZA CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	24	42.3	92	32.6	28.6
43 HARNETT	19	28.4	90	27.6	30.5
44 HAYWOOD	15	31.2	100	41.5	28.0
45 HENDERSON	29	41.2	138	40.5	24.7
46 HERKSTORF	10	42.7	41	34.5	19.2
47 HOKE	12	49.5	30	25.5	45.1
48 HYDE	1	17.6	6	20.7	16.1*
49 IREDELL	22	23.8	142	31.6	27.9
50 JACKSON	11	40.2	46	34.1	31.0
51 JOHNSTON	18	22.1	104	26.2	26.6
52 JONES	1	10.1	9	18.2	19.5
53 LEE	12	28.2	47	22.7	23.2
54 LENOIR	15	25.0	75	24.9	25.2
55 LINCOLN	5	10.1	46	19.4	18.2
56 MCDOWELL	8	22.0	47	25.9	23.7
57 MACON	12	50.3	36	30.9	28.9
58 MADISON	10	57.6	42	48.6	28.9
59 MARTIN	9	34.5	40	30.3	27.8
60 MECKLENBURG	112	23.1	496	21.4	24.3
61 MITCHELL	3	20.5	33	45.3	24.5
62 MONTGOMERY	10	40.7	42	34.8	29.3
63 MOORE	28	46.6	105	36.5	27.1
64 NASH	29	39.4	114	31.6	31.9
65 NEW HANOVER	25	21.0	124	21.4	23.4
66 NORTHAMPTON	14	63.7	49	43.9	39.4
67 ONDLOW	16	12.2	75	11.9	30.5
68 ORANGE	17	18.7	79	18.2	23.9
69 PAMLICO	9	82.2	27	49.3	34.8
70 PASQUOTANK	8	25.5	49	32.2	27.9
71 PENDER	7	25.0	36	27.5	24.4
72 PERQUIMANS	3	26.6	23	42.7	27.1
73 PERSON	14	44.5	55	35.5	31.3
74 PIT	29	27.9	132	26.4	31.7
75 POLK	7	46.5	30	40.9	22.1
76 RANDOLPH	28	26.8	108	21.4	24.7
77 RICHMOND	13	28.3	61	26.6	24.7
78 ROBESON	30	27.9	128	23.9	29.4
79 ROCKINGHAM	28	32.5	152	35.4	33.6
80 ROWAN	41	38.0	202	38.3	29.1
81 RUTHERFORD	41	70.4	143	49.8	39.8
82 SAMPSON	13	25.6	70	27.7	24.8
83 SCOTLAND	4	11.6	31	18.2	20.9
84 STANLY	6	11.6	61	24.0	20.0
85 STOKES	8	21.6	79	43.7	50.1
86 SURRY	26	41.6	110	35.6	26.8
87 SWAIN	1	9.1	13	24.3	16.6
88 TRANSYLVANIA	7	26.6	39	30.1	23.5
89 TYRRELL	2	47.7	9	43.6	36.6
90 UNION	28	32.4	104	25.4	31.1
91 VANCE	24	61.2	64	43.1	36.4
92 WAKE	57	14.2	327	17.4	24.5
93 WARREN	4	24.1	48	58.1	41.1
94 WASHINGTON	6	41.4	27	37.1	41.7
95 WATAUGA	5	14.2	37	21.4	22.7*
96 WAYNE	24	23.9	117	23.7	27.6
97 WILKES	25	40.9	95	31.1	30.0
98 WILSON	15	22.7	105	32.2	35.1
99 YADKIN	1d	58.9	78	52.1	38.5
100 YANCEY	7	43.7	26	32.7	20.1

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## PNEUMONIA AND INFLUENZA

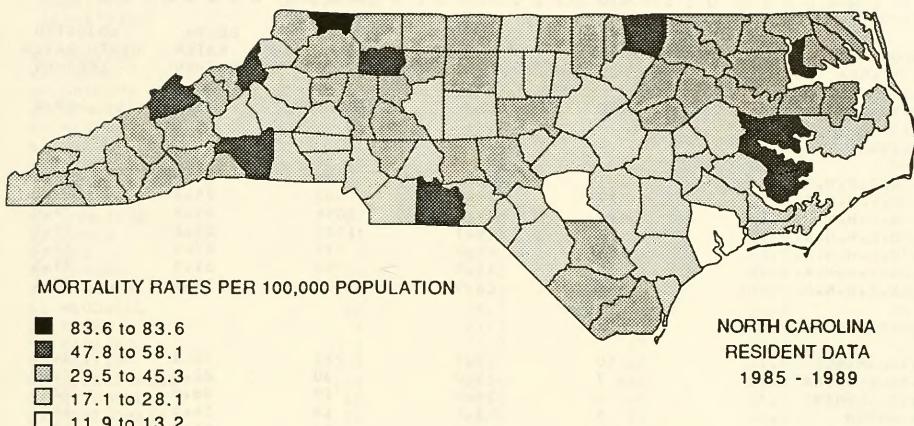


FIGURE 10.A

## PNEUMONIA AND INFLUENZA

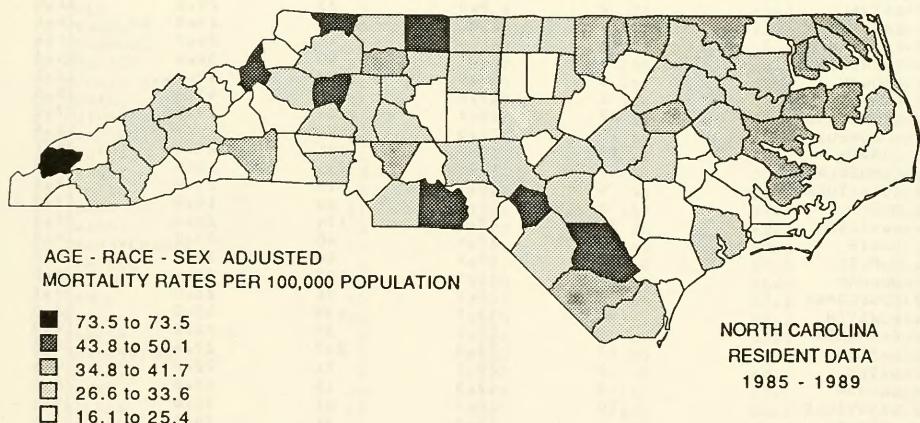


FIGURE 10.B

TABLE - 14

MORTALITY STATISTICS FOR 1989

NORTH CAROLINA RESIDENTS

CHRONIC OBSTRUCTIVE PULMONARY DISEASES

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	1930	29.4	9322	29.1	29.1
<b>REGIONS</b>					
D.E.H.N.R. I	287	38.8	1454	39.9	30.6
D.E.H.N.R. II	359	26.0	1683	25.2	25.1
D.E.H.N.R. III	449	33.5	2096	31.8	29.8
D.E.H.N.R. IV	326	25.7	1538	25.1	28.7
D.E.H.N.R. V	184	25.0	975	27.0	33.3
D.E.H.N.R. VI	211	33.5	968	31.3	33.5
D.E.H.N.R. VII	114	23.9	608	26.3	30.1
<b>COUNTIES</b>					
1 ALAMANCE	50	46.7	221	42.3	34.8
2 ALEXANDER	7	25.0	30	22.0	22.0
3 ALLEGHANY	3	30.0	19	38.8	22.6
4 ANSUN	5	19.1	19	14.5	14.7
5 ASHE	11	46.8	54	46.2	39.2
6 AVERY	7	45.1	37	48.7	38.2
7 BEAUFORT	23	54.5	101	47.8	43.0
8 BERTIE	4	19.0	33	31.2	36.0
9 BLADEN	11	35.5	48	31.1	32.3
10 BRUNSWICK	10	19.4	56	22.8	21.9
11 BUNCOMBE	77	43.9	377	43.9	34.9
12 BURKE	23	29.6	116	30.3	28.2
13 CABARRUS	30	30.8	140	29.6	25.8
14 CALDWELL	24	33.0	100	26.2	30.0
15 CAMDEN	3	48.2	16	53.6	48.9
16 CARTERET	14	27.2	76	30.3	24.9
17 CASWELL	2	9.0	33	29.6	31.0
18 CATAWBA	37	31.2	149	25.8	24.8
19 CHATHAM	8	21.4	45	24.7	22.4
20 CHEROKEE	7	33.1	40	38.5	26.3
21 CHOWAN	8	58.9	27	40.1	32.2
22 CLAY	2	27.8	17	47.3	25.5
23 CLEVELAND	22	25.1	128	29.5	27.2
24 COLUMBUS	15	28.5	78	29.7	28.4
25 CRAVEN	17	20.6	111	27.4	38.1
26 CUMBERLAND	47	17.8	231	18.0	37.0
27 CURRITUCK	4	28.0	16	23.4	23.4
28 DARE	6	26.3	20	19.9	17.0
29 DAVIDSON	34	27.1	174	28.4	27.9
30 DAVIE	11	39.4	40	29.2	28.8
31 DUPLIN	13	30.9	80	38.4	35.8
32 DURHAM	55	31.5	197	23.4	26.6
33 EDGECOMBE	12	20.2	74	25.0	29.1
34 FORSYTH	90	33.7	435	33.0	32.6
35 FRANKLIN	5	13.9	38	21.9	19.9
36 GASTON	47	27.0	237	27.4	26.8
37 GATES	2	20.2	11	22.8	20.4
38 GRAHAM	3	42.3	15	42.2	28.5
39 GRANVILLE	10	25.3	61	32.0	34.4
40 GREENE	4	24.3	21	25.5	30.1
41 GUILFORD	108	31.8	504	30.3	29.7

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
CHRONIC OBSTRUCTIVE PULMONARY DISEASES CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	15	26.4	93	32.9	29.6
43 HARNETT	22	32.8	104	31.9	35.3
44 HAYWOOD	18	37.5	120	49.8	30.2
45 HENDERSON	40	56.3	181	53.2	29.2
46 HERITAGE	10	42.7	36	30.3	28.5
47 HÜKE	2	8.2	27	22.9	45.3
48 HYDE	0	0.0	11	38.0	33.9
49 IREDELL	24	25.9	109	24.2	21.1
50 JACKSON	6	21.9	39	28.9	26.8
51 JOHNSTON	27	33.1	118	29.7	28.7
52 JONES	2	20.2	17	34.4	36.6
53 LEE	9	21.2	55	26.5	27.7
54 LENIOR	26	43.3	93	30.9	32.0
55 LINCOLN	9	18.2	48	20.3	22.0
56 MCDOWELL	13	35.7	73	40.2	35.5
57 MACON	9	37.7	50	42.9	20.4
58 MADISON	1	5.8	17	19.7	12.6
59 MARTIN	5	19.2	42	31.8	29.1
60 MECKLENBURG	121	24.9	556	23.9	28.1
61 MITCHELL	10	68.4	45	61.7	34.8
62 MONTGOMERY	12	48.9	49	40.6	35.7
63 MOORE	23	38.3	123	42.7	30.6
64 NASH	27	36.7	128	35.5	36.5
65 NEW HANOVER	26	21.9	155	26.7	28.8
66 NORTHAMPTON	5	22.8	27	24.2	16.2
67 ONSLOW	22	16.7	109	17.3	40.0
68 ORANGE	19	20.9	81	18.7	25.5
69 PAMLICO	8	73.0	26	47.5	37.7
70 PASQUOTANK	9	23.6	33	21.7	21.3
71 PENDER	14	50.0	54	41.2	39.3
72 PERQUIMANS	2	17.7	17	31.6	21.6
73 PERSON	8	25.5	48	31.0	27.8
74 PITK	36	34.7	156	31.2	41.3
75 POLK	3	19.9	28	38.2	19.5
76 RANDOLPH	36	34.5	119	23.6	21.2
77 RICHMOND	15	32.7	92	40.2	36.1
78 ROBESON	19	17.7	154	28.8	35.2
79 RUCKINGHAM	31	35.9	147	34.2	31.1
80 RÜMAN	36	33.3	166	31.5	24.3
81 RUTHERFORD	16	27.5	98	34.1	25.8
82 SAMPSON	18	35.5	84	33.2	29.9
83 SCOTLAND	10	29.1	44	25.8	31.4
84 STANLY	8	15.4	51	20.1	16.0
85 STOKES	8	21.6	44	24.3	23.0
86 SURRY	21	33.6	115	37.3	33.4
87 SWAIN	3	27.2	22	41.1	34.2
88 TRANSLYVANIA	14	53.2	49	37.8	27.0
89 TYRRELL	2	47.7	8	38.8	34.7
90 UNION	18	20.8	69	16.8	19.0
91 VANCE	10	25.5	64	32.8	34.2
92 WAKE	90	22.5	381	20.2	29.2
93 WARREN	8	48.2	28	33.9	30.3
94 WASHINGTON	4	27.0	30	41.2	42.8
95 WATAUGA	8	22.7	38	22.0	28.1*
96 WAYNE	36	35.9	143	29.0	36.3
97 WILKES	25	40.9	106	34.7	31.8
98 WILSON	18	27.3	100	30.7	34.5
99 YADKIN	11	36.0	47	31.4	21.5
100 YANCEY	11	68.7	30	37.8	23.2

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## CHRONIC OBSTRUCTIVE PULMONARY DISEASES

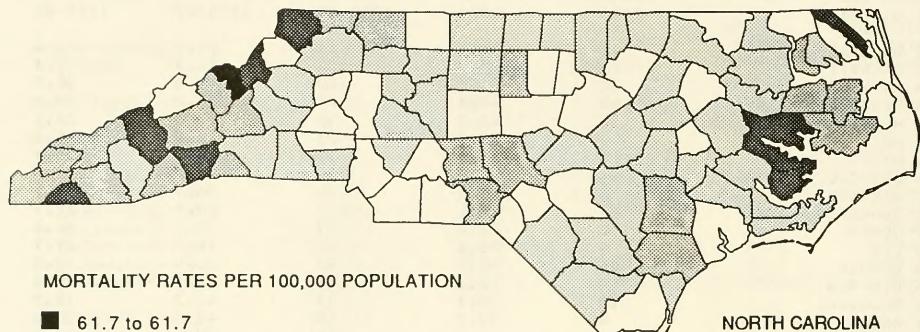


FIGURE 11.A

## CHRONIC OBSTRUCTIVE PULMONARY DISEASES

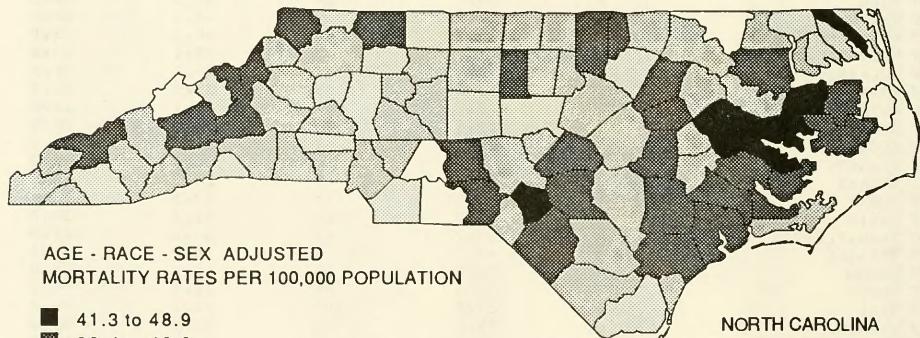


FIGURE 11.B

TABLE - 15  
MORTALITY STATISTICS FOR 1989

NORTH CAROLINA RESIDENTS

CHRONIC LIVER DISEASE AND CIRRHOSIS

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	760	11.6	3338	10.4	10.4
<b>REGIONS</b>					
D.E.E.H.N.R. I	95	12.8	384	10.5	10.9
D.E.E.H.N.R. II	159	11.5	684	10.2	10.5
D.E.E.H.N.R. III	134	10.0	665	10.1	10.1
D.E.E.H.N.R. IV	149	11.8	625	10.2	10.2
D.E.E.H.N.R. V	85	11.6	392	10.9	11.6
D.E.E.H.N.R. VI	89	14.1	348	11.2	11.3
D.E.E.H.N.R. VII	49	10.3	240	10.4	11.5
<b>COUNTIES</b>					
1 ALAMANCE	15	14.0	55	10.5	9.4
2 ALEXANDER	3	10.7	9	6.6	9.8
3 ALLEGHANY	0	0.0	4	8.2	28.0*
4 ANSON	3	11.4	10	7.6	6.8
5 ASHE	3	12.8	9	7.7	5.0
6 AVERY	5	32.2	14	18.4	28.2*
7 BEAUFORT	10	23.7	36	17.0	16.4
8 BERTIE	2	9.5	9	8.5	10.3
9 BLADEN	5	16.1	14	9.1	8.5
10 BRUNSWICK	4	7.8	34	13.8	13.2
11 BUNCOMBE	16	9.1	81	9.4	9.0
12 BURKE	11	14.1	42	11.0	13.0
13 CABARRUS	8	8.2	47	9.9	9.2
14 CALDWELL	5	7.0	27	7.6	10.6
15 CAMDEN	0	0.0	1	3.3	2.3
16 CARTERET	6	11.7	32	12.8	10.5
17 CASWELL	2	9.0	9	8.1	7.3
18 CATAWBA	10	8.4	45	7.8	8.3
19 CHATHAM	7	18.7	11	6.0	5.6
20 CHEROKEE	2	9.5	16	15.4	14.1
21 CHOWAN	1	7.4	3	4.5	4.4
22 CLAY	0	0.0	4	11.1	8.2
23 CLEVELAND	20	22.8	65	15.0	15.1
24 COLUMBUS	5	9.5	23	8.8	8.0
25 CRAVEN	10	12.1	31	7.7	9.9
26 CUMBERLAND	23	8.7	128	10.0	13.5
27 CURRITUCK	2	14.0	7	10.2	9.6
28 DARE	1	4.4	10	10.0	8.6
29 DAVIDSON	9	7.2	49	8.0	7.8
30 DAVIE	2	7.2	8	5.8	5.8
31 DUPLIN	8	19.0	29	13.9	13.6
32 DURHAM	20	11.5	86	10.2	9.9
33 EUGECOMBE	11	18.0	47	15.9	13.9
34 FORSYTH	37	13.9	188	14.3	13.5
35 FRANKLIN	2	5.6	15	8.7	8.5
36 GASTON	26	14.9	122	14.1	15.3
37 GATES	0	0.0	4	8.3	9.2
38 GRAHAM	0	0.0	3	8.4	6.3
39 GRANVILLE	8	20.3	19	10.0	7.3
40 GREENE	0	0.0	6	7.3	5.7
41 GUILFORD	30	8.8	157	9.4	9.1

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
CHRONIC LIVER DISEASE AND CIRRHOSIS CONT'D.

COUNTIES (COUNT'D)	NUMBER OF DEATHS 1989	DEATH RATE# 1989	NUMBER OF DEATHS 1985-89	DEATH RATE# 1985-89	ADJUSTED DEATH RATE# 1985-89
42 HALIFAX	10	17.0	59	20.9	17.3
43 HARNETT	11	16.4	32	9.8	10.5
44 HAYWOOD	7	14.6	27	11.2	7.5
45 HENDERSON	6	8.5	33	9.7	6.0
46 HERTFORD	6	25.6	22	18.5	18.8
47 HOKE	2	8.2	8	6.8	6.4
48 HYDE	0	0.0	5	17.3	19.0
49 IREDELL	14	15.1	49	10.9	10.8
50 JACKSON	3	11.0	15	11.1	13.6
51 JOHNSTON	12	14.7	48	12.1	11.8
52 JONES	1	10.1	5	10.1	8.0
53 LEE	7	16.5	29	14.0	14.2
54 LENOIR	10	16.7	40	13.3	12.2
55 LINCOLN	4	8.1	20	8.4	9.6
56 MCDOWELL	3	8.2	22	12.1	11.0
57 MACON	6	25.2	13	11.2	6.3
58 MADISON	2	11.5	5	5.8	4.5
59 MARTIN	0	23.0	16	12.1	10.8
60 MECKLENBURG	45	9.3	215	9.3	9.3
61 MITCHELL	3	20.5	11	15.1	10.6
62 MONTGOMERY	0	0.0	10	8.3	7.9
63 MOORE	9	15.0	52	18.1	15.6
64 NASH	17	23.1	53	14.7	14.0
65 NEW HANOVER	14	11.8	72	12.4	12.7
66 NORTHAMPTON	3	13.7	15	13.4	11.8
67 ONDLOW	11	8.4	40	6.3	11.0
68 ORANGE	2	2.2	21	4.8	6.4
69 PAMLICO	1	9.1	6	11.0	7.7
70 PASQUOTANK	6	19.1	14	9.2	8.8
71 PENOER	1	3.6	10	7.6	6.4
72 PERQUIMANS	2	17.7	8	14.9	13.5
73 PERSON	3	9.5	14	9.0	8.1
74 PITTS	10	9.6	50	10.0	11.5
75 POLK	3	19.9	6	8.2	7.8
76 RANDOLPH	5	4.8	36	7.1	8.1
77 RICHMOND	8	17.4	38	16.6	15.4
78 ROBESON	15	13.9	54	10.1	10.4
79 RUCKINGHAM	11	12.8	52	12.1	11.6
80 ROWAN	19	17.6	65	12.3	11.6
81 RUTHERFORD	12	20.0	32	11.1	11.0
82 SAMPSON	6	11.8	26	10.3	10.5
83 SCOTLAND	3	8.7	20	11.7	12.3
84 STANLY	5	9.0	22	8.7	8.5
85 STOKES	3	8.1	14	7.7	8.5
86 SURRY	8	12.8	38	12.3	15.9
87 SWAIN	1	9.1	10	18.7	18.0
88 TRANSYLVANIA	8	30.4	17	13.1	16.4
89 TYRKELL	1	23.8	5	24.2	19.0
90 UNION	5	5.8	25	6.1	7.2
91 VANCE	6	15.3	26	13.3	13.4
92 WAKE	32	8.0	129	5.9	8.2
93 WARREN	3	18.1	15	18.2	14.6
94 WASHINGTON	1	6.9	6	8.2	8.1
95 WATAUGA	2	5.7	8	4.6	14.0
96 WAYNE	19	18.9	64	13.0	12.5
97 WILKES	5	8.2	22	7.2	6.8
98 WILSON	6	9.1	38	11.7	11.2
99 YAOKEIN	2	6.5	16	10.7	15.6
100 YANCEY	2	12.5	6	7.6	5.4

# SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## CHRONIC LIVER DISEASE AND CIRRHOSIS

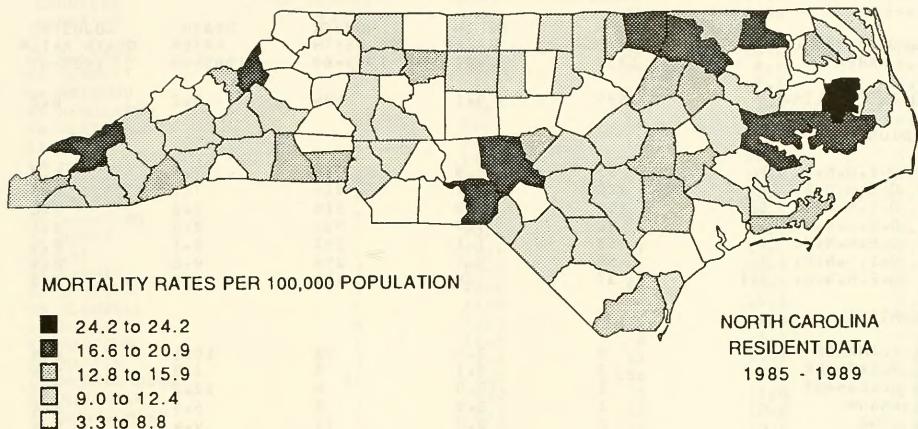


FIGURE 12.A

## CHRONIC LIVER DISEASE AND CIRRHOSIS

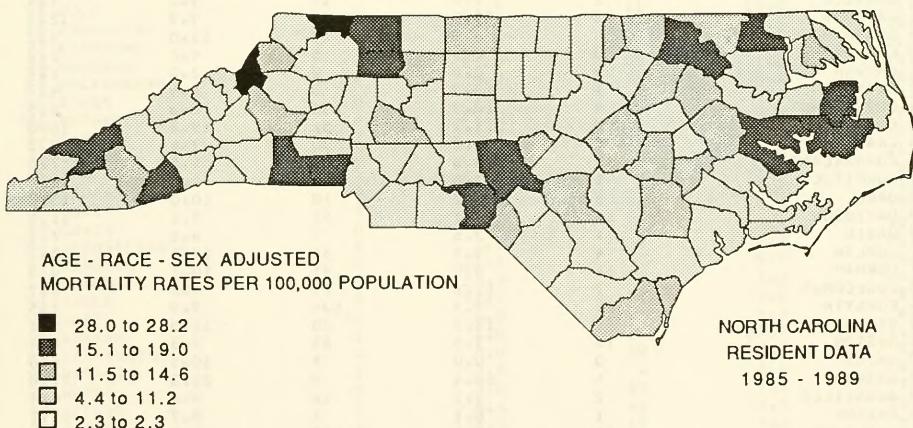


FIGURE 12.B

TABLE - 16  
MORTALITY STATISTICS FOR 1989

NORTH CAROLINA RESIDENTS  
NEPHRITIS AND NEPHROSIS

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	535	8.1	2634	8.2	8.2
REGIONS					
D.E.H.N.R. I	65	8.8	283	7.8	6.7
D.E.H.N.R. II	120	8.7	516	7.7	8.3
D.E.H.N.R. III	104	7.8	513	7.8	8.0
D.E.H.N.R. IV	98	7.7	536	8.8	8.4
D.E.H.N.R. V	52	7.1	291	8.1	8.4
D.E.H.N.R. VI	59	9.4	298	9.6	8.4
D.E.H.N.R. VII	37	7.8	197	8.5	9.5
COUNTIES					
1 ALAMANCE	3	7.5	53	10.1	8.9
2 ALEXANDER	2	7.1	5	3.7	5.4
3 ALLEGHANY	1	10.0	6	12.2	7.3
4 ANSON	1	3.8	9	6.9	5.4
5 ASHE	0	0.0	11	9.4	5.5
6 AVERY	1	6.4	4	5.3	4.5
7 BEAUFORT	6	14.2	23	10.9	8.5
8 BERTIE	4	19.0	17	16.1	12.1
9 BLADEF	5	16.1	21	13.6	11.7
10 BRUNSWICK	5	9.7	13	5.3	5.7
11 BUNCOMBE	15	8.5	59	6.9	5.0
12 BURKE	5	6.4	22	5.7	4.4
13 CABARRUS	10	10.3	31	6.5	6.9
14 CALDWELL	4	5.6	18	5.1	6.0
15 CAMDEN	0	0.0	1	3.3	2.6
16 CARTERET	1	1.9	14	5.6	6.9
17 CASWELL	2	9.0	10	9.0	7.9
18 CATAWBA	13	11.0	56	9.7	12.4
19 CHATHAM	3	8.0	20	11.0	9.2
20 CHEROKEE	0	0.0	5	4.8	2.7
21 CHOWAN	0	0.0	2	3.0	1.2
22 CLAY	1	13.9	3	8.4	4.7
23 CLEVELAND	9	10.3	38	8.8	8.5
24 COLUMBUS	9	17.1	52	19.8	16.6
25 CRAVEN	5	6.1	30	7.4	9.2
26 CUMBERLAND	10	3.8	58	4.5	7.6
27 CURRITUCK	1	7.0	4	5.9	6.8
28 DARE	3	13.2	10	10.0	13.2*
29 DAVIDSON	16	12.7	56	9.1	11.6
30 DAVIE	1	3.6	9	6.6	7.9
31 DUPLIN	4	9.5	36	17.3	13.2
32 DURHAM	14	8.0	85	10.1	9.4
33 EDGECOMBE	7	11.8	29	9.8	6.7
34 FORSYTH	21	7.9	104	7.9	7.5
35 FRANKLIN	5	13.9	20	11.5	7.8
36 GASTON	13	7.5	63	7.3	8.4
37 GATES	0	0.0	5	10.3	5.0
38 GRAHAM	4	56.4	9	25.3	17.0
39 GRANVILLE	2	5.1	16	8.4	4.9
40 GREENE	1	6.1	8	9.7	11.1
41 GUILFORD	31	9.1	112	6.7	6.7

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
NEPHRITIS AND NEPHROSIS CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE*	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	6	10.6	37	13.1	7.8
43 HARNETT	4	6.0	28	8.6	9.3
44 HAYWOOD	2	4.2	17	7.1	5.3*
45 HENDERSON	4	5.7	27	7.9	5.7
46 HERTFORD	3	12.8	12	10.1	6.1
47 HOKE	3	12.4	11	9.3	7.3
48 HYDE	1	17.6	3	10.4	8.2
49 IREDELL	11	11.9	47	10.4	11.0
50 JACKSON	5	18.3	17	12.6	14.0
51 JOHNSTON	7	8.6	33	8.3	8.4
52 JONES	1	10.1	4	8.1	6.2
53 LEE	6	14.1	37	17.8	18.4
54 LENOIR	9	15.0	45	14.9	12.3
55 LINCOLN	5	10.1	20	8.4	12.5
56 McDOWELL	4	11.0	19	10.5	8.1
57 MACON	4	16.8	11	9.4	4.8
58 MAIDEN	2	11.5	8	9.3	5.5
59 MARTIN	2	7.7	21	15.9	9.9
60 MECKLENBURG	34	7.0	158	6.8	7.5
61 MITCHELL	1	6.8	8	11.0	6.7
62 MONTGOMERY	2	8.1	13	10.8	9.7
63 MOORE	5	8.3	29	10.1	7.5
64 NASH	4	5.4	28	7.8	7.1
65 NEW HANOVER	11	9.2	48	8.3	8.6
66 NORTHAMPTON	3	13.7	16	14.3	12.2
67 UNSLOW	4	3.0	22	3.5	7.9
68 ORANGE	5	5.5	24	5.5	6.8
69 PAMLICO	0	0.0	2	3.7	3.7
70 PASQUOTANK	3	9.5	13	8.5	6.2
71 PENDER	3	10.7	12	9.2	6.5
72 PERQUIMANS	3	26.6	11	20.4	10.0
73 PERSON	5	15.9	20	12.9	10.8
74 PITTS	9	8.7	36	7.2	7.4
75 POLK	3	19.9	11	15.0	8.2
76 RANOLPH	5	4.8	37	7.3	10.8
77 RICHMOND	3	6.5	29	12.7	11.4
78 ROBESON	14	13.0	59	11.0	9.7
79 RUCKINGHAM	8	9.3	35	8.1	8.0
80 ROWAN	8	7.4	49	9.3	7.5
81 RUTHERFORD	7	12.0	25	8.7	7.6
82 SAMPSON	3	5.9	21	8.3	6.5
83 SCOTLAND	2	5.8	13	7.6	11.4
84 STANLY	9	17.4	25	9.8	8.7
85 STOKES	0	0.0	4	2.2	3.5
86 SURRY	3	4.8	30	9.7	7.6
87 SWAIN	0	0.0	8	14.9	10.3
88 TRANSYLVANIA	2	7.6	9	6.9	10.7
89 TYRRELL	1	23.8	2	9.7	5.5
90 UNION	6	6.9	24	5.9	6.8
91 VANCE	5	12.7	19	9.8	8.1
92 WAKE	24	6.0	118	6.3	8.5
93 WARREN	1	6.0	17	20.6	11.1
94 WASHINGTON	0	0.0	10	13.7	9.6
95 WATAUGA	1	2.8	7	4.0	9.0
96 WAYNE	7	7.0	39	7.9	7.7
97 WILKES	4	6.5	26	8.5	11.3
98 WILSON	1	1.5	17	5.2	5.1
99 YADKIN	3	9.8	13	8.7	6.3
100 YANCEY	1	6.2	3	3.8	2.5

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

T A B L E - 1 7

M O R T A L I T Y S T A T I S T I C S F O R 1 9 8 9

N O R T H C A R O L I N A R E S I D E N T S

U N I N T E N T I O N A L M O T O R V E H I C L E I N J U R I E S

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	1580	24.1	7966	24.9	24.9
<b>REGIONS</b>					
D.E.H.N.R. I	169	22.8	865	23.7	23.8
D.E.H.N.R. II	324	23.5	1500	22.4	22.8
D.E.H.N.R. III	291	21.7	1519	23.1	23.2
D.E.H.N.R. IV	286	22.6	1487	24.3	23.6
D.E.H.N.R. V	230	31.3	1146	31.7	30.3
D.E.H.N.R. VI	158	25.1	813	26.3	25.7
D.E.H.N.R. VII	122	25.6	636	27.6	26.8
<b>COUNTIES</b>					
1 ALAMANCE	21	19.0	117	22.4	23.0
2 ALEXANDER	12	42.8	48	35.2	32.7
3 ALLEGHANY	1	10.0	4	8.2	6.7
4 ANSON	11	42.0	39	29.7	26.9
5 ASHE	4	17.0	24	20.5	16.5
6 AVERY	4	25.8	19	25.0	19.4
7 BEAUFORT	11	26.0	56	26.5	28.0
8 BERTIE	4	19.0	41	38.8	40.1
9 BLADEN	13	41.9	57	36.9	34.1
10 BRUNSWICK	19	36.9	91	37.1	39.2
11 BUNCOMBE	45	25.6	173	20.2	19.4
12 BURKE	15	19.3	87	22.7	20.8
13 CABARRUS	19	19.5	109	23.0	24.6
14 CALDWELL	17	23.8	83	23.4	23.7
15 CAMDEN	2	32.1	8	26.8	27.0
16 CARTERET	14	27.2	64	25.5	26.1
17 CASWELL	9	40.5	42	37.7	36.1
18 CATAWBA	34	28.7	154	26.6	26.7
19 CHATHAM	11	29.4	56	30.8	31.8
20 CHEROKEE	3	14.2	23	22.2	36.9
21 CHOWAN	2	14.7	19	28.2	32.6
22 CLAY	1	13.9	9	25.1	19.1
23 CLEVELAND	14	16.0	82	18.9	19.3
24 COLUMBUS	17	32.2	111	42.3	43.4
25 CRAVEN	13	15.8	78	19.3	19.0
26 CUMBERLAND	65	24.7	330	25.7	25.1
27 CURRITUCK	4	28.0	24	35.1	39.6
28 DARE	0	26.3	20	19.9	23.6
29 DAVIDSON	35	27.9	160	26.1	27.0
30 DAVIE	7	25.1	46	33.6	40.8
31 DUPLIN	19	45.1	70	33.6	34.2
32 DURHAM	21	12.0	126	15.0	14.1
33 EDGECOMBE	15	25.3	72	24.3	25.9
34 FORSYTH	35	13.1	196	14.9	15.4
35 FRANKLIN	12	33.3	56	32.3	31.2
36 GASTON	40	23.0	201	23.2	24.1
37 GATES	6	60.6	26	53.8	51.2
38 GRAHAM	1	14.1	6	16.9	45.8
39 GRANVILLE	18	45.6	77	40.3	43.6
40 GREENE	1	6.1	23	27.9	25.1
41 GUILFORD	69	20.3	346	20.8	21.4

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
UNINTENTIONAL MOTOR VEHICLE INJURIES CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE*	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	19	33.5	79	28.0	23.1
43 HARNETT	23	34.3	112	34.4	34.6
44 HAYWOOD	5	10.4	59	24.5	20.0
45 HENDERSON	21	29.8	91	26.7	25.3
46 HERTFORD	5	21.3	38	32.0	21.1
47 HOKE	4	16.5	24	20.4	16.9
48 HYDE	4	70.4	13	44.9	43.0
49 IREDELL	38	41.1	144	32.0	33.1
50 JACKSON	9	32.9	27	20.0	18.6
51 JOHNSTON	24	29.4	135	34.0	34.8
52 JONES	3	30.2	20	40.5	41.9
53 LEE	16	37.7	69	33.3	34.5
54 LENOIR	17	28.3	81	26.9	29.4
55 LINCOLN	16	32.4	77	32.5	33.8
56 MCDOWELL	8	22.0	53	29.2	29.6
57 MACON	2	8.4	19	16.3	50.0
58 MAIDEN	2	11.5	18	20.8	16.5
59 MARTIN	11	42.2	45	34.1	31.4
60 MECKLENBURG	76	15.6	382	16.5	16.9
61 MITCHELL	7	47.9	23	31.6	24.6
62 MONTGOMERY	5	20.4	40	33.2	34.6
63 MOORE	19	31.6	93	32.3	34.0
64 NASH	29	39.4	122	33.8	33.9
65 NEW HANOVER	19	16.0	113	19.5	19.5
66 NORTHAMPTON	4	18.2	40	35.8	27.8
67 ONDOW	19	14.4	137	21.7	20.3
68 ORANGE	14	15.4	84	19.4	19.7
69 PAMlico	1	9.1	14	25.6	28.1
70 PASQUOTANK	11	35.0	39	25.6	26.2
71 PENN	15	53.6	50	38.1	37.8
72 PERQUIMANS	1	8.9	9	16.7	22.0
73 PERSON	9	28.6	43	27.8	27.3
74 PITT	21	20.2	109	21.8	20.6
75 POLK	2	13.3	23	31.4	32.3
76 RANDOLPH	34	32.6	156	30.9	30.1
77 RICHMOND	17	37.0	75	32.7	33.7
78 ROBESON	43	39.9	212	39.6	30.1
79 RUCKINGHAM	20	23.2	139	32.4	32.9
80 ROWAN	36	33.3	136	25.8	25.7
81 RUTHERFORD	17	29.2	87	30.3	30.0
82 SAMSON	22	43.4	100	39.5	40.3
83 SCOTLAND	8	23.3	64	37.5	41.3
84 STANLY	14	27.0	57	22.5	22.1
85 STOKES	8	21.6	50	27.6	30.3
86 SURRY	21	33.6	88	28.5	25.7
87 SWAIN	2	18.1	14	26.1	27.8
88 TRANSYLVANIA	2	7.6	31	23.9	22.6
89 TYRRELL	1	23.8	4	19.4	28.7
90 UNION	25	28.9	110	26.8	28.8
91 VANCE	10	25.5	64	32.8	34.9
92 WAKE	56	14.0	330	17.5	17.6
93 WARREN	10	60.2	39	47.2	50.2
94 WASHINGTON	3	20.7	25	34.3	38.5
95 WATAUGA	6	17.0	33	19.1	14.4
96 WAYNE	31	30.9	121	24.5	24.7
97 WILKES	15	24.5	83	27.2	29.8
98 WILSON	18	27.3	95	29.2	28.9
99 YADKIN	6	19.6	35	23.4	30.1
100 YANCEY	6	37.5	20	25.2	19.6

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## MOTOR VEHICLE INJURIES

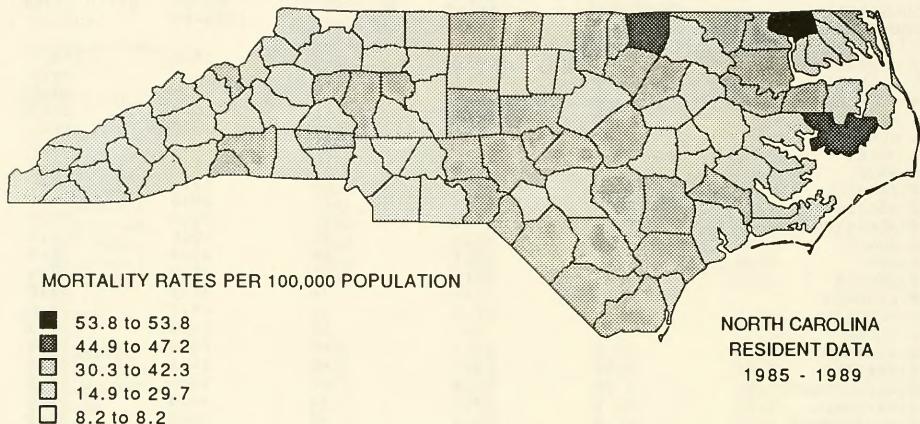


FIGURE 13.A

## MOTOR VEHICLE INJURIES

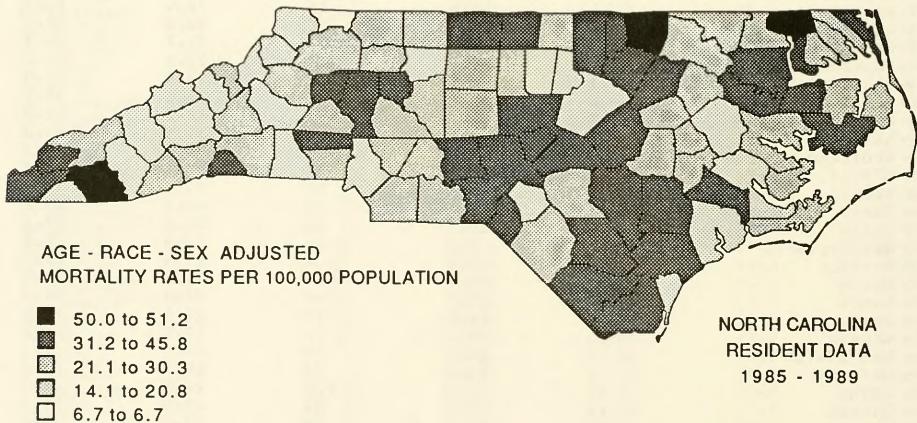


FIGURE 13.B

TABLE - 18

MORTALITY STATISTICS FOR 1989

NORTH CAROLINA RESIDENTS

ALL OTHER UNINTENTIONAL INJURIES AND  
ADVERSE EFFECTS

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE# 1989	NUMBER OF DEATHS 1985-89	DEATH RATE# 1985-89	ADJUSTED DEATH RATE# 1985-89
NURTH CAROLINA	1597	24.3	7662	23.9	23.9
<b>REGIONS</b>					
D.E.H.N.R. I	212	28.6	967	26.5	25.9
D.E.H.N.R. II	316	22.9	1488	22.3	23.1
D.E.H.N.R. III	288	21.5	1441	21.9	22.0
D.E.H.N.R. IV	314	24.8	1476	24.1	23.4
D.E.H.N.R. V	209	28.4	968	26.8	26.6
D.E.H.N.R. VI	158	25.1	786	25.4	23.7
D.E.H.N.R. VII	100	21.0	536	23.2	24.1
<b>COUNTIES</b>					
1 ALAMANCE	23	21.5	116	22.2	21.4
2 ALEXANDER	5	17.8	29	21.3	24.0
3 ALLEGHANY	2	20.0	9	16.4	12.4
4 ANSON	7	26.7	50	38.1	31.5
5 ASHE	5	21.3	23	19.7	12.4
6 AVERY	5	32.2	21	27.7	22.3
7 BEAUFORT	11	26.0	63	29.8	27.4
8 BERTIE	10	47.6	35	33.1	22.7
9 BLAUVEN	8	25.8	50	32.4	29.3
10 BRUNSWICK	8	15.5	48	19.5	20.0
11 BUNCOMBE	45	25.6	243	28.3	26.5
12 BURKE	26	33.4	100	26.1	31.4
13 CABARRUS	20	20.6	95	20.1	21.2
14 CALDWELL	20	28.0	71	20.1	23.8
15 CAMDEN	2	32.1	14	46.9	40.5
16 CARTERET	19	36.9	76	30.3	35.7
17 CASWELL	6	27.0	30	27.0	22.4
18 CATANBA	28	23.6	131	22.7	26.5
19 CHATHAM	11	29.4	58	31.9	28.4
20 CHEROKEE	9	42.6	26	27.0	23.4
21 CHowan	8	58.9	23	34.2	29.8
22 CLAY	0	0.0	3	8.4	5.3
23 CLEVELAND	10	11.4	98	22.6	22.7
24 COLUMBUS	21	39.8	90	34.3	32.3
25 CRAVEN	19	23.0	74	18.3	19.2
26 CUMBERLAND	77	29.2	313	24.4	29.8
27 CURRITUCK	0	0.0	6	8.8	8.2
28 DARE	9	39.5	31	30.9	33.0
29 DAVIDSON	25	19.9	126	20.5	21.8
30 DAVIE	5	17.9	34	24.9	25.2
31 DUPLIN	4	21.4	62	29.7	26.0
32 DURHAM	42	24.1	203	24.1	22.8
33 EDGECOMBE	20	33.7	92	31.1	26.1
34 FORSYTH	60	22.5	315	23.9	23.3
35 FRANKLIN	13	36.1	55	31.7	27.1
36 GASTON	50	28.7	203	23.5	24.4
37 GATES	1	10.1	12	24.8	21.5
38 GRAHAM	3	42.3	17	47.8	52.5
39 GRANVILLE	10	25.3	49	25.7	23.2
40 GREENE	9	54.6	21	25.5	25.7
41 GUILFORD	68	20.1	353	21.2	20.6

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
ALL OTHER UNINTENTIONAL INJURIES AND ADVERSE EFFECTS CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	23	40.5	96	34.0	27.0
43 HARNETT	21	31.3	92	28.3	30.1
44 HAYWOOD	10	20.8	74	30.7	19.9
45 HENDERSON	30	42.0	98	28.8	26.9
46 HERTFORD	5	21.3	46	38.7	32.6
47 HOKE	3	12.4	18	15.3	17.3
48 HYDE	2	35.2	8	27.6	25.5
49 IREDELL	27	29.2	123	27.3	27.8
50 JACKSON	7	25.0	30	22.2	21.4
51 JOHNSTON	13	15.9	110	27.7	29.0
52 JONES	3	30.2	15	30.4	28.5
53 LEE	15	35.3	58	28.0	28.6
54 LENOIR	14	23.3	82	27.2	24.5
55 LINCOLN	11	22.3	60	25.3	28.6
56 MCDOWELL	6	16.5	38	20.9	16.7
57 MACON	7	29.4	35	30.0	17.6
58 MADISON	5	28.8	31	35.9	58.9
59 MARTIN	5	19.2	35	26.5	22.7
60 MECKLENBURG	108	22.2	462	19.9	20.3
61 MITCHELL	2	13.7	14	19.2	11.3
62 MONTGOMERY	8	32.6	34	28.2	25.9
63 MOORE	11	18.3	61	21.2	20.0
64 NASH	33	44.9	132	36.6	34.2
65 NEW HANOVER	20	16.8	115	19.8	20.8
66 NORTHAMPTON	9	41.0	33	29.6	20.4
67 ONSLOW	17	12.9	111	17.6	22.8
68 ORANGE	13	14.3	63	14.5	16.9
69 PAMLICO	3	27.4	24	43.9	41.2
70 PASQUOTANK	8	25.5	30	19.7	18.2
71 PENDER	6	21.4	34	25.9	23.2
72 PERQUIMANS	5	44.4	17	31.6	29.4
73 PERSON	9	28.6	36	23.3	20.9
74 PITTS	12	11.6	107	21.4	22.7
75 POLK	7	46.5	26	35.5	21.9
76 RANDOLPH	17	16.3	94	18.6	19.0
77 RICHMOND	8	17.4	56	24.4	24.1
78 ROBESON	41	38.1	189	35.3	28.4
79 ROCKINGHAM	23	26.7	103	24.0	23.7
80 ROWAN	25	23.1	146	27.7	25.4
81 RUTHERFORD	14	24.0	74	25.8	25.0
82 SAMPSON	15	29.6	66	26.1	22.8
83 SCOTLAND	10	29.1	39	22.8	24.5
84 STANLY	16	30.9	66	26.0	24.5
85 STOKES	18	48.5	40	22.1	28.8
86 SURRY	14	22.4	61	19.8	15.7
87 SWAIN	5	54.4	23	43.0	40.8
88 TRANSYLVANIA	6	22.8	22	17.0	19.3
89 TYRRELL	0	0.0	2	9.7	7.5
90 UNION	16	18.5	75	18.3	21.3
91 VANCE	13	33.1	77	39.5	32.5
92 WAKE	69	17.2	305	16.2	19.2
93 WARREN	7	42.2	28	33.9	33.7
94 WASHINGTON	3	20.7	19	26.1	24.8
95 WATAUGA	5	14.2	35	20.2	22.1
96 WAYNE	29	28.9	122	24.7	24.1
97 WILKES	8	13.1	57	18.7	17.0
98 WILSON	14	21.2	81	24.9	23.0
99 YAQUIN	9	29.5	45	30.1	29.0
100 YANCEY	4	25.0	19	23.9	53.3*

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## ALL OTHER INJURIES AND ADVERSE EFFECTS

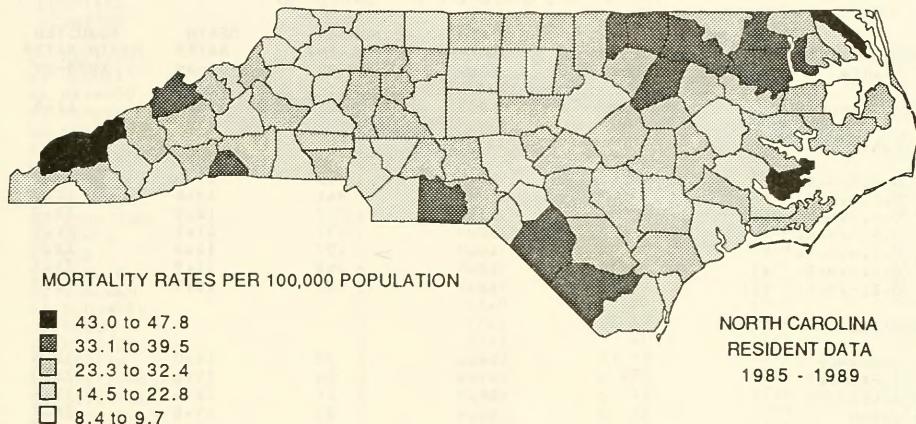


FIGURE 14.A

## ALL OTHER INJURIES AND ADVERSE EFFECTS

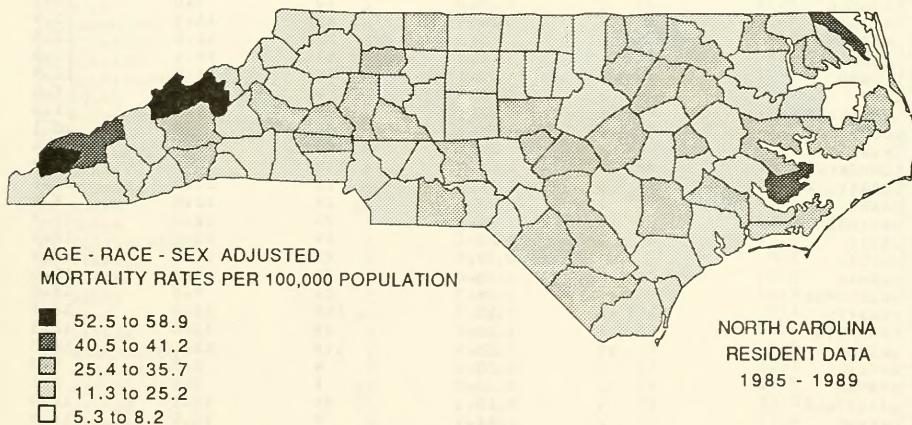


FIGURE 14.B

TABLE - 19  
MORTALITY STATISTICS FOR 1989  
NORTH CAROLINA RESIDENTS  
SUICIDE

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE† 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	871	13.3	4003	12.5	12.5
REGIONS					
D.E.H.N.R. I	117	15.8	548	15.0	14.0
D.E.H.N.R. II	202	14.6	841	12.6	12.2
D.E.H.N.R. III	196	14.6	909	13.8	13.2
D.E.H.N.R. IV	137	10.8	677	11.1	11.9
D.E.H.N.R. V	79	10.7	409	11.3	12.8
D.E.H.N.R. VI	79	12.5	368	11.9	13.1
D.E.H.N.R. VII	61	12.8	251	10.9	11.3
COUNTIES					
1 ALAMANCE	15	14.0	73	14.0	13.5
2 ALEXANDER	5	17.8	26	19.1	23.0
3 ALLEGHANY	2	20.0	11	22.4	17.4
4 ANSON	3	11.4	26	19.8	26.7
5 ASHE	1	4.3	13	11.1	8.2
6 AVERY	3	19.3	5	6.6	5.3
7 BEAUFORT	9	21.3	31	14.7	15.9
8 BERTIE	2	9.5	11	10.4	10.5
9 BLADEN	3	9.7	19	12.3	13.6
10 BRUNSWICK	8	15.5	29	11.8	11.5
11 BUNCOMBE	25	14.2	119	13.9	12.9
12 BURKE	12	15.4	59	15.4	15.8
13 CABARRUS	16	16.4	60	12.7	12.1
14 CALDWELL	14	19.6	56	15.8	14.9
15 CAMDEN	0	0.0	3	10.0	10.2
16 CARTERET	6	11.7	33	13.2	11.3
17 CASWELL	2	9.0	10	9.0	10.2
18 CATAWBA	17	14.4	69	11.9	10.9
19 CHATHAM	2	5.3	23	12.6	12.3
20 CHEROKEE	4	18.9	17	16.4	11.6
21 CHOWAN	3	22.1	8	11.9	12.5
22 CLAY	0	0.0	4	11.1	7.6
23 CLEVELAND	12	13.7	49	11.3	11.4
24 COLUMBUS	6	11.4	25	9.5	10.1
25 CRAVEN	12	14.5	50	12.4	13.4
26 CUMBERLAND	25	9.5	136	10.6	12.2
27 CURRITUCK	3	21.0	15	22.0	21.1
28 DARE	2	8.8	13	13.0	9.4
29 DAVIDSON	15	11.9	75	12.2	11.5
30 DAVIE	7	25.1	19	13.9	12.9
31 DUPLIN	4	9.5	23	11.0	12.4
32 DURHAM	14	8.0	78	9.3	10.6
33 EDGECOMBE	4	6.7	29	9.8	13.0
34 FORSYTH	42	15.7	168	12.8	12.7
35 FRANKLIN	6	16.7	19	11.0	12.3
36 GASTON	39	22.4	113	13.1	12.0
37 GATES	2	20.2	4	8.3	9.8
38 GRAHAM	0	0.0	1	2.8	2.1
39 GRANVILLE	4	10.1	25	13.1	12.0
40 GREENE	2	12.1	9	10.9	13.3
41 GUILFORD	46	13.6	225	13.5	13.7

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
SUICIDE CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE# 1989	NUMBER OF DEATHS 1985-89	DEATH RATE# 1985-89	ADJUSTED DEATH RATE# 1985-89
42 HALIFAX	4	7.0	28	9.9	11.7
43 HARNETT	7	10.4	41	12.6	13.3
44 HAYWOOD	10	20.8	41	17.0	13.0
45 HENDERSON	7	9.9	57	16.7	12.4
46 HERTFORD	1	4.3	9	7.6	5.7
47 HOKE	1	4.1	7	5.9	5.8
48 HYDE	0	0.0	6	20.7	19.5
49 IREDELL	21	22.7	73	16.2	15.9
50 JACKSON	8	29.2	25	18.5	18.6
51 JOHNSTON	11	13.5	64	16.1	15.7
52 JONES	1	10.1	4	8.1	7.2
53 LEE	6	14.1	31	14.9	15.2
54 LENOIR	6	10.0	36	11.9	14.2
55 LINCOLN	8	16.2	36	15.2	15.4
56 MCDOWELL	8	22.0	26	14.3	20.5
57 MACON	3	12.6	19	16.3	11.5
58 MAGGISON	4	23.1	12	13.9	11.0
59 MARTIN	4	15.3	18	13.6	15.4
60 MECKLENBURG	58	11.9	257	11.1	11.5
61 MITCHELL	1	6.8	13	17.8	12.6
62 MONTGOMERY	2	8.1	12	9.9	9.4
63 MOORE	9	15.0	39	13.5	12.0
64 NASH	8	10.9	37	10.3	11.6
65 NEW HANOVER	23	19.3	77	13.3	13.3
66 NORTHHAMPTON	7	31.9	15	13.4	16.0
67 ONSLOW	9	6.8	47	7.5	9.4
68 ORANGE	10	11.0	51	11.8	12.2
69 PAMlico	1	9.1	8	14.6	15.0
70 PASQUOTANK	5	15.9	13	8.5	9.9
71 PENDER	5	17.9	17	13.0	13.4
72 PERQUIMANS	3	26.6	12	22.3	24.5
73 PERSON	4	12.7	21	13.6	14.5
74 PITTS	8	7.7	53	10.6	13.2
75 POLK	3	19.9	11	15.0	11.8
76 RANDOLPH	10	9.6	59	11.7	10.5
77 RICHMOND	6	13.1	20	8.7	9.2
78 ROBESON	12	11.1	51	9.5	11.1
79 RUCKINGHAM	12	13.9	67	15.6	15.3
80 ROWAN	11	10.2	69	13.1	12.1
81 RUTHERFORD	7	12.0	38	13.2	12.2
82 SAMPSON	5	9.9	35	13.8	14.9
83 SCOTLAND	6	17.4	23	13.5	15.6
84 STANLY	6	11.6	46	18.1	15.6
85 STOKES	6	16.2	25	13.8	13.3
86 SURRY	13	20.8	58	18.8	17.6
87 SWAIN	1	9.1	11	20.5	20.0
88 TRANSYLVANIA	6	22.8	25	19.3	17.4
89 TYRRELL	0	0.0	2	9.7	11.0
90 UNION	9	10.4	43	10.5	10.6
91 VANCE	2	5.1	20	10.3	12.9
92 WAKE	44	11.0	172	9.1	8.9
93 WARREN	3	18.1	10	12.1	18.5
94 WASHINGTON	3	20.7	5	6.9	5.7
95 WATAUGA	7	19.9	22	12.7	10.4
96 WAYNE	12	12.0	58	11.8	13.1
97 WILKES	15	24.5	61	20.0	18.9
98 WILSON	8	12.1	54	16.6	18.6
99 YADKIN	3	9.8	23	15.4	14.0
100 YANCEY	1	6.2	9	11.3	19.8

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## SUICIDE

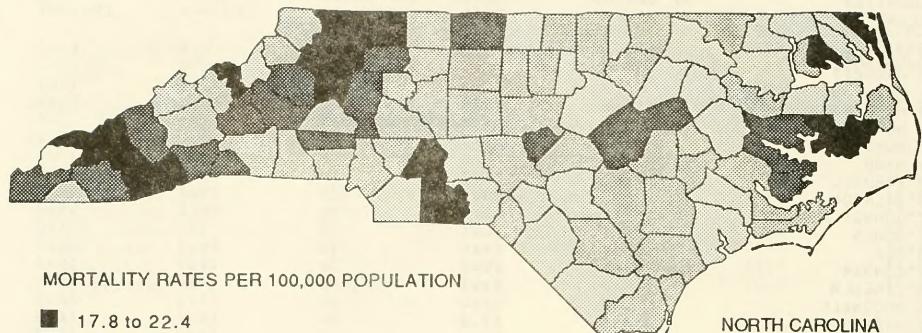


FIGURE 15.A

## SUICIDE

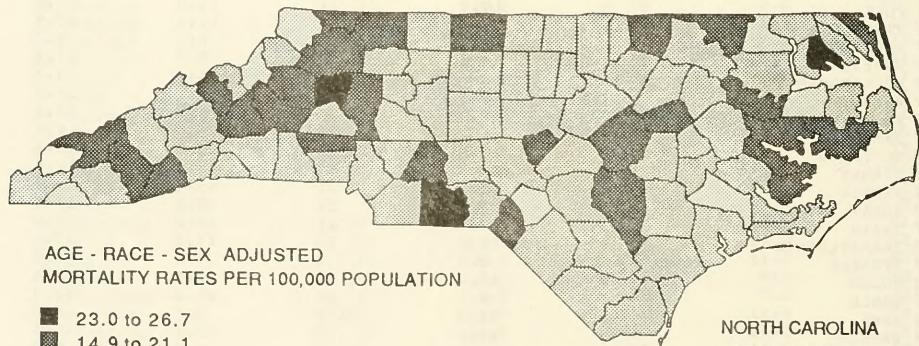


FIGURE 15.B

T A B L E - 2 0

M U R T A L I T Y S T A T I S T I C S F O R 1 9 8 9

N O R T H C A R O L I N A R E S I D E N T S

H O M I C I D E

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	704	10.7	3015	9.4	9.4
<b>REGIONS</b>					
D.E.H.N.R. I	60	8.1	258	7.1	9.8
D.E.H.N.R. II	159	11.5	637	9.5	10.7
D.E.H.N.R. III	130	9.7	565	8.6	9.5
D.E.H.N.R. IV	132	10.4	623	10.2	9.0
D.E.H.N.R. V	116	15.8	465	12.9	11.3
D.E.H.N.R. VI	69	10.9	286	9.2	8.2
D.E.H.N.R. VII	38	8.0	181	7.8	7.9
<b>COUNTIES</b>					
1 ALAMANCE	6	5.6	39	7.5	8.2
2 ALEXANDER	0	0.0	2	1.5	1.2
3 ALLEGHANY	0	0.0	1	2.0	1.7
4 ANSON	5	19.1	25	19.1	17.5
5 ASHE	0	0.0	0	0.0	0.0
6 AVERY	2	12.9	3	4.0	41.2
7 BEAUFORT	1	2.4	16	7.6	7.9
8 BERTIE	4	19.0	12	11.4	10.9
9 BLADEN	2	6.4	17	11.0	8.5
10 BRUNSWICK	3	5.8	27	11.0	11.6
11 BUNCOMBE	14	8.0	59	6.9	9.3
12 BURKE	8	10.3	31	8.1	10.4
13 CABARRUS	8	8.2	35	7.4	10.6
14 CALDWELL	8	11.2	29	8.2	9.0
15 CAMDEN	0	0.0	4	13.4	12.9
16 CARTERET	5	9.7	14	5.6	7.3
17 CASWELL	1	4.5	7	6.3	5.3
18 CATAWBA	12	10.1	40	6.9	11.1
19 CHATHAM	3	8.0	19	10.4	9.9
20 CHEROKEE	2	9.5	6	5.8	5.3
21 CHOWAN	1	7.4	7	10.4	10.3
22 CLAY	0	0.0	0	0.0	0.0
23 CLEVELAND	6	6.8	43	9.9	11.1
24 COLUMBUS	11	20.9	29	11.1	9.8
25 CRAVEN	4	4.8	33	8.2	7.4
26 CUMBERLAND	42	15.9	168	13.1	11.8
27 CURRITUCK	0	0.0	5	7.3	10.3
28 DARE	0	0.0	3	3.0	4.0
29 DAVIDSON	9	7.2	48	7.8	10.8
30 DAVIE	2	7.2	9	6.6	8.5
31 DUPLIN	8	19.0	19	9.1	9.5
32 DURHAM	16	9.2	104	12.3	9.7
33 EDGECOMBE	9	15.2	38	12.8	9.9
34 FORSYTH	34	12.7	144	10.9	10.4
35 FRANKLIN	3	8.3	25	14.4	13.1
36 GASTON	20	11.5	81	9.4	12.4
37 GATES	1	10.1	4	8.3	4.3
38 GRAHAM	1	14.1	4	11.2	9.3
39 GRANVILLE	7	17.7	26	13.6	11.9
40 GREENE	1	6.1	6	7.3	7.2
41 GUILFORD	43	12.7	171	10.3	9.5

\* SEE SECTION II

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
HOMICIDE CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	6	10.6	28	9.9	7.5
43 HARNETT	13	19.4	43	13.2	13.9
44 HAYWOOD	4	8.3	14	5.8	8.7
45 HENDERSON	2	2.8	22	6.5	9.3
46 HEREFORD	2	8.5	12	10.1	6.8
47 HOKE	4	16.5	10	8.5	9.5
48 HYDE	2	35.2	3	10.4	10.6
49 IREDELL	9	9.7	42	9.3	10.6
50 JACKSON	2	7.3	6	4.4	5.5
51 JOHNSTON	15	18.4	47	11.8	13.3
52 JONES	1	10.1	4	8.1	10.0
53 LEE	9	21.2	25	12.0	13.1
54 LENOIR	14	23.3	41	13.6	11.0
55 LINCOLN	4	8.1	16	6.8	8.2
56 McDOWELL	4	11.0	17	9.4	7.6
57 MACON	1	4.2	5	4.3	20.3
58 MADISON	1	5.8	7	8.1	6.6
59 MARTIN	3	11.5	13	9.9	8.6
60 MECKLENBURG	82	16.9	301	13.0	11.4
61 MITCHELL	0	0.0	2	2.7	1.9
62 MONTGOMERY	1	4.1	7	5.8	6.0
63 MOORE	7	11.7	24	8.3	9.3
64 NASH	11	15.0	45	12.5	11.7
65 NEW HANOVER	5	4.2	42	7.2	7.4
66 NORTHHAMPTON	3	13.7	16	14.3	8.3
67 ONSLOW	4	3.0	34	5.4	5.8
68 ORANGE	2	2.2	29	6.7	6.5
69 PAMLICO	1	9.1	2	3.7	3.2
70 PASQUOTANK	3	9.5	12	7.9	7.3
71 PENOER	2	7.1	16	12.2	10.4
72 PERQUIMANS	3	26.6	4	7.4	5.0
73 PERSON	2	6.4	9	5.8	5.8
74 PITTS	11	10.6	34	6.8	6.8
75 POLK	0	0.0	5	6.8	14.8
76 RANDOLPH	10	9.6	44	8.7	15.2
77 RICHMOND	8	17.4	29	12.7	12.9
78 ROBESON	19	17.7	91	17.0	12.0
79 ROCKINGHAM	10	11.6	35	8.1	8.9
80 ROWAN	10	9.3	38	7.2	8.9
81 RUTHERFORD	7	12.0	30	10.4	12.4
82 SAMPSON	7	13.8	22	8.7	7.6
83 SCOTLAND	8	23.3	29	17.0	14.0
84 STANLY	1	1.9	11	4.3	4.8
85 STOKES	3	8.1	12	6.6	7.9
86 SURRY	5	8.0	17	5.5	8.4
87 SWAIN	1	9.1	7	13.1	14.3
88 TRANSYLVANIA	3	11.4	8	6.2	11.8
89 TYRKELL	0	0.0	2	9.7	11.8
90 UNION	7	8.1	28	6.8	8.9
91 VANCE	7	17.8	28	14.4	11.7
92 WAKE	27	6.7	134	7.1	7.0
93 WARREN	3	18.1	5	6.1	2.0
94 WASHINGTON	0	0.0	4	5.5	4.1
95 WATAUGA	1	2.8	4	2.3	1.9
96 WAYNE	17	16.9	65	13.2	11.9
97 WILKES	6	9.8	32	10.5	13.5
98 WILSON	9	13.6	45	13.8	12.1
99 YADKIN	0	0.0	2	1.3	1.1
100 YANCEY	0	0.0	3	3.8	3.2

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## HOMICIDE

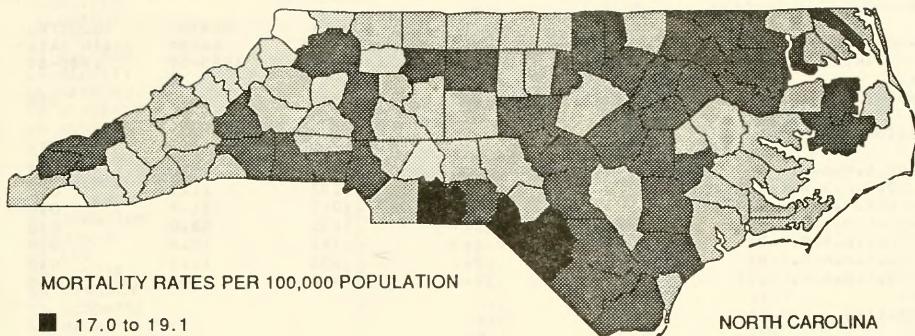


FIGURE 16.A

## HOMICIDE

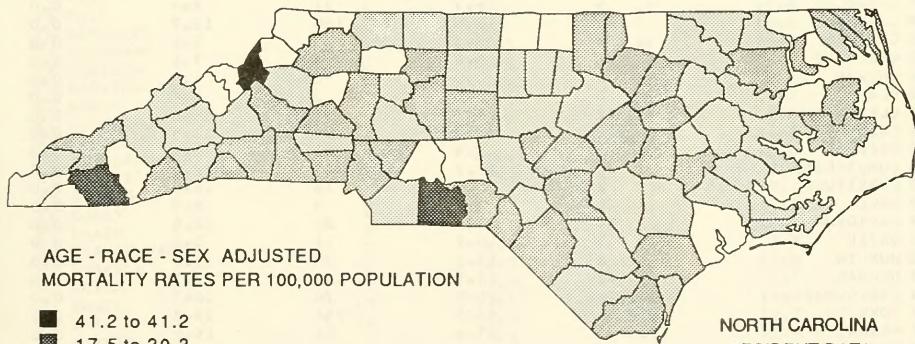


FIGURE 16.B

T A B L E - 2 1

M O R T A L I T Y S T A T I S T I C S F O R 1 9 8 9

N O R T H C A R O L I N A R E S I D E N T S

I N F A N T D E A T H S ( P E R 1 0 0 0 L I V E B I R T H S )

GEOGRAPHICAL AREA	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
NORTH CAROLINA	1171	11.5	5651	12.0	0.0
<b>REGIONS</b>					
D.E.H.N.R. I	94	10.1	442	10.0	0.0
D.E.H.N.R. II	232	10.6	1192	11.9	0.0
D.E.H.N.R. III	218	11.5	1019	11.6	0.0
D.E.H.N.R. IV	259	12.7	1185	13.0	0.0
D.E.H.N.R. V	155	11.6	783	12.6	0.0
D.E.H.N.R. VI	106	10.7	583	12.3	0.0
D.E.H.N.R. VII	107	13.0	447	11.2	0.0
<b>COUNTIES</b>					
1 ALAMANCE	17	11.1	66	9.3	0.0
2 ALEXANDER	0	0.0	15	9.0	0.0
3 ALLEGHANY	0	0.0	6	13.3	0.0
4 ANSON	6	15.3	27	14.9	0.0
5 ASHE	1	3.9	12	10.6	0.0
6 AVERY	3	16.0	6	6.2	0.0
7 BEAUFORT	2	3.4	31	10.9	0.0
8 BERTIE	2	6.5	20	12.9	0.0
9 BLADEN	3	6.6	27	13.9	0.0
10 BRUNSWICK	7	9.9	24	7.1	0.0
11 BUNCOMBE	17	7.1	101	9.0	0.0
12 BURKE	9	9.1	42	9.0	0.0
13 CABARRUS	12	8.6	70	10.7	0.0
14 CALDWELL	19	19.8	63	13.5	0.0
15 CAMDEN	1	10.4	2	5.3	0.0
16 CARTERET	5	7.2	39	11.0	0.0
17 CASWELL	4	14.9	11	8.5	0.0
18 CATAWBA	25	14.6	100	12.7	0.0
19 CHATHAM	3	5.3	25	9.2	0.0
20 CHEROKEE	1	5.0	8	7.6	0.0
21 CHowan	0	0.0	5	5.3	0.0
22 CLAY	0	0.0	3	8.4	0.0
23 CLEVELAND	22	16.3	89	14.6	0.0
24 COLUMBUS	18	23.0	50	13.4	0.0
25 CRAVEN	15	9.4	91	11.4	0.0
26 CUMBERLAND	70	12.2	345	12.6	0.0
27 CURRITUCK	2	10.4	16	16.5	0.0
28 DARE	1	2.9	9	5.9	0.0
29 DAVIDSON	20	11.8	88	10.8	0.0
30 DAVIE	3	10.1	11	7.2	0.0
31 DUPLIN	8	13.1	38	13.1	0.0
32 DURHAM	42	13.5	163	12.1	0.0
33 EDGECOMBE	16	16.2	76	16.7	0.0
34 FORSYTH	54	13.5	246	13.3	0.0
35 FRANKLIN	9	17.9	36	15.2	0.0
36 GASTON	23	8.4	157	12.3	0.0
37 GATES	2	14.8	10	15.2	0.0
38 GRAHAM	3	25.4	4	8.4	0.0
39 GRANVILLE	4	7.0	37	14.1	0.0
40 GREENE	4	20.8	16	16.1	0.0
41 GUILFORD	68	12.9	312	13.2	0.0

\* SEE SECTION 11

MORTALITY STATISTICS FOR 1989, NORTH CAROLINA RESIDENTS  
 INFANT DEATHS (PER 1000 LIVE BIRTHS) CONT'D.

COUNTIES (CONT'D)	NUMBER OF DEATHS 1989	DEATH RATE* 1989	NUMBER OF DEATHS 1985-89	DEATH RATE* 1985-89	ADJUSTED DEATH RATE* 1985-89
42 HALIFAX	16	17.3	67	15.8	0.0
43 HARNETT	10	7.9	66	11.4	0.0
44 HAYWOOD	4	7.3	22	8.3	0.0
45 HENDERSON	8	9.7	45	11.4	0.0
46 HERTFORD	5	13.2	20	11.4	0.0
47 HOUKE	6	13.0	19	9.8	0.0
48 HYDE	1	13.5	5	14.8	0.0
49 IREDELL	9	6.4	78	12.8	0.0
50 JACKSON	4	13.1	18	12.7	0.0
51 JOHNSTON	12	9.6	60	10.8	0.0
52 JONES	2	13.2	11	16.0	0.0
53 LEE	10	15.4	60	12.9	0.0
54 LENOIR	10	12.2	55	13.9	0.0
55 LINCOLN	6	8.6	28	8.5	0.0
56 McDOWELL	3	6.0	27	11.7	0.0
57 MACON	2	8.2	13	11.0	0.0
58 MAISON	4	22.1	9	10.0	0.0
59 MARTIN	1	2.8	19	10.5	0.0
60 MECKLENBURG	104	12.2	470	12.2	0.0
61 MITCHELL	1	5.9	5	5.5	0.0
62 MONTGOMERY	3	7.9	23	14.2	0.0
63 MOORE	9	11.2	37	10.0	0.0
64 NASH	15	12.7	83	14.9	0.0
65 NEW HANOVER	22	13.4	79	10.2	0.0
66 NORTHHAMPTON	6	17.5	26	17.3	0.0
67 ONSLOW	41	12.2	196	11.7	0.0
68 ORANGE	13	11.1	60	11.1	0.0
69 PAMlico	1	7.1	10	14.0	0.0
70 PASQUOTANK	5	9.8	23	9.6	0.0
71 PENDER	6	14.9	21	12.0	0.0
72 PERQUIMANS	2	13.1	10	13.5	0.0
73 PERSON	5	11.1	23	11.3	0.0
74 PITTS	29	16.9	119	15.4	0.0
75 POLK	1	6.3	13	18.8	0.0
76 RANDOLPH	16	10.4	71	10.0	0.0
77 KICHLMOND	8	12.0	46	15.0	0.0
78 ROBESON	20	10.6	122	13.5	0.0
79 ROCKINGHAM	9	7.5	57	9.9	0.0
80 ROWAN	14	9.1	81	11.2	0.0
81 RUTHERFORD	12	14.6	37	9.8	0.0
82 SAMSON	12	16.7	38	11.8	0.0
83 SCOTLAND	8	14.1	33	12.6	0.0
84 STANLY	6	8.4	31	9.0	0.0
85 STOKES	5	10.4	17	7.7	0.0
86 SURRY	6	7.2	47	12.5	0.0
87 SWAIN	1	4.9	9	10.1	0.0
88 TRANSYLVANIA	2	6.9	11	7.8	0.0
89 TYRKELL	0	0.0	4	13.6	0.0
90 UNION	11	7.4	73	11.7	0.0
91 VANCE	15	21.1	46	15.0	0.0
92 WAKE	81	11.9	376	12.9	0.0
93 WARREN	2	8.4	23	19.4	0.0
94 WASHINGTON	3	13.8	21	19.5	0.0
95 WATAUGA	1	2.8	14	7.6	0.0
96 WAYNE	18	10.6	86	10.7	0.0
97 WILKES	13	17.2	48	13.0	0.0
98 WILSON	10	9.8	44	9.4	0.0
99 YADKIN	1	2.6	13	7.3	0.0
100 YANCEY	0	0.0	6	6.8	0.0

\* SEE SECTION II

DIVISION OF STATISTICS AND INFORMATION SERVICES  
 DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

## INFANT DEATHS

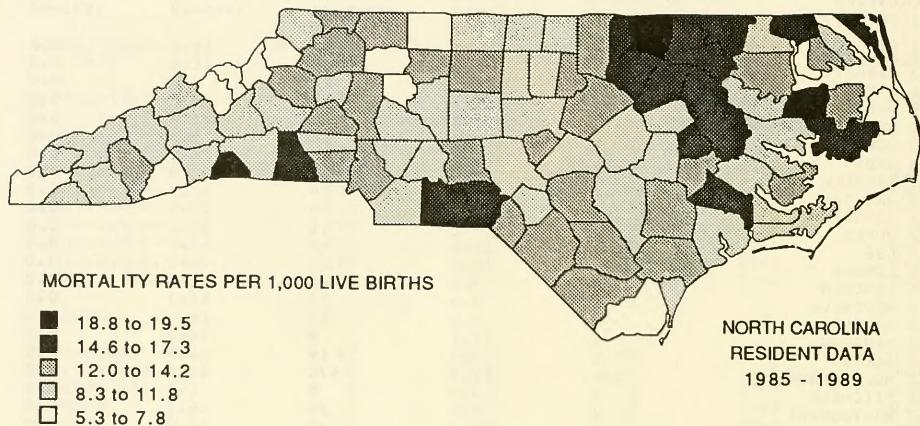


FIGURE 17

# **VI. TABLES AND FIGURES: MULTIPLE CONDITIONS PRESENT AT DEATH 1985-89**



TABLE 22

DEATHS BY SELECTED UNDERLYING CAUSE WITH FREQUENCY OF MENTIONED  
CONDITIONS, NORTH CAROLINA RESIDENTS, 1989

Underlying Cause of Death	Conditions Mentioned on Death Certificate (Numbers Refer to Row Titles)															
	Total Under- lying*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Diseases of heart . . . . .	18,961	18,959	1,919	7,673	774	19	17	93	3	8	17	151	3	90	5	11
2 Cerebrovascular disease . . . . .	4,613	1,294	4,613	1,288	159	0	7	25	0	3	4	20	2	21	4	1
3 Atherosclerosis . . . . .	369	235	1	369	12	0	1	2	1	0	0	1	0	2	0	0
4 Cancer . . . . .	12,969	2,612	354	454	1,969	253	310	1,385	173	630	120	3,876	169	1,129	148	321
5 Lip . . . . .	238	48	6	12	238	238	0	0	0	0	3	3	0	0	0	0
6 Stomach . . . . .	304	69	12	16	304	0	304	0	0	0	0	0	0	0	0	0
7 Colon, rectum, rectosigmoid junction & anus . . . . .	1,349	260	29	47	1,349	1	0	1,349	2	1	5	0	5	2	5	2
8 Liver . . . . .	172	31	3	6	172	0	1	1	172	0	0	0	1	0	0	0
9 Pancreas . . . . .	624	113	16	22	624	0	0	3	0	624	0	2	0	0	0	1
10 Larynx . . . . .	104	29	4	8	104	0	0	0	0	0	104	1	0	0	0	0
11 Trachea, bronchus and lung . . . . .	3,843	728	73	135	3,843	5	1	7	0	0	9,3843	3	7	1	0	0
12 Malignant melanoma . . . . .	164	21	4	2	164	0	0	0	0	0	0	1	164	1	0	0
13 Female breast . . . . .	1,099	163	29	19	1,099	1	1	5	0	0	1	3	0	1,099	2	2
14 Cervix uteri . . . . .	143	39	4	6	143	0	0	0	0	0	0	0	0	0	0	143
15 Ovary & other uterine adnexa . . . . .	307	70	4	8	307	1	0	2	0	0	0	1	0	3	0	307
16 Prostate . . . . .	891	254	40	49	891	0	1	8	0	0	3	0	0	0	0	0
17 Bladder . . . . .	218	51	12	15	218	0	0	0	0	0	1	0	0	0	0	0
18 Brain tumors . . . . .	304	59	15	9	270	0	0	0	0	0	0	1	0	0	0	0
19 Non-Hodgkin lymphoma . . . . .	456	88	8	9	456	0	0	3	0	0	0	1	0	0	0	0
20 Leukemia . . . . .	490	117	43	20	490	0	4	0	2	0	5	0	2	0	2	0
21 Diabetes Mellitus . . . . .	1,372	917	295	408	30	0	1	5	1	0	2	0	2	0	1	0
22 Pneumonia & influenza . . . . .	1,900	648	260	188	102	2	1	11	1	3	0	20	0	10	0	2
23 Chronic obstructive pulmonary disease & allied cond. . . . .	1,930	895	98	185	107	2	2	8	1	2	2	50	1	9	0	0
24 Chronic liver disease and cirrhosis . . . . .	760	142	16	23	12	1	0	3	3	0	1	1	1	0	0	0
25 Septicemia . . . . .	526	210	63	27	24	1	0	3	0	0	0	6	0	3	0	0
26 Nephritis, nephrotic syndrome & nephrosis . . . . .	535	294	44	65	12	0	1	0	0	0	2	0	1	0	1	0
27 Motor vehicle injuries—unintentional injuries . . . . .	1,580	86	4	7	3	0	0	1	0	0	0	0	1	0	0	0
28 All other unintentional injuries & adverse effects . . . . .	1,597	339	57	67	29	0	0	5	0	0	2	6	0	0	0	0
29 Suicide . . . . .	871	28	3	2	15	0	0	2	0	1	1	2	0	1	0	0
30 Homicide . . . . .	704	28	1	5	2	0	0	0	0	0	0	0	0	0	0	0
TOTAL DEATHS** . . . . .	57,438	29,367	8,340	11,530	14,506	285	341	1,575	182	656	154	4,169	181	1,298	158	341

TABLE 22 — continued  
DEATHS BY SELECTED UNDERLYING CAUSE WITH FREQUENCY OF MENTIONED  
CONDITIONS, NORTH CAROLINA RESIDENTS, 1989

Underlying Cause of Death	Conditions Mentioned on Death Certificate (Numbers Refer to Row Titles)										Hyper-			
	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1 Diseases of heart . . . . .	129	34	4	41	41	1,949	767	1,549	97	276	801	12	501	0
2 Cerebrovascular disease . . . . .	34	7	1	0	6	418	433	179	11	175	115	4	238	0
3 Atherosclerosis . . . . .	4	0	0	0	1	25	27	24	1	13	62	1	23	0
4 Cancer . . . . .	939	237	276	475	519	448	763	831	61	481	462	1	300	1
5 Lip . . . . .	1	1	0	0	1	2	12	14	2	4	3	0	12	0
6 Stomach . . . . .	2	0	0	0	0	9	13	5	0	6	3	0	4	0
7 Colon, rectum, rectosigmoid junction & anus . . . . .	8	4	1	1	4	53	51	38	1	41	43	0	31	0
8 Liver . . . . .	1	0	0	0	0	9	4	6	26	7	9	0	2	0
9 Pancreas . . . . .	6	0	0	0	2	35	17	20	2	17	9	0	17	0
10 Larynx . . . . .	0	0	0	0	1	3	2	10	3	3	1	0	9	0
11 Trachea, bronchus and lung . . . . .	15	6	3	6	7	102	295	538	16	69	48	0	76	0
12 Malignant melanoma . . . . .	0	0	0	0	0	3	7	2	0	2	4	0	4	0
13 Female breast . . . . .	0	0	0	0	2	39	35	13	4	24	16	0	18	0
14 Cervix uteri . . . . .	0	0	0	0	0	8	6	6	1	7	15	0	4	0
15 Ovary & other uterine adnexa . . . . .	0	1	1	0	0	12	11	6	0	12	11	0	3	0
16 Prostate . . . . .	891	3	0	2	3	37	66	47	0	28	82	0	19	0
17 Bladder . . . . .	6	218	0	0	1	8	10	0	6	29	0	9	0	0
18 Brain tumors . . . . .	0	1	270	0	0	13	22	5	0	8	3	0	21	0
19 Non-Hodgkins lymphoma . . . . .	4	0	456	7	16	37	7	2	55	31	0	14	1	0
20 Leukemia . . . . .	3	0	0	7	490	18	52	15	1	81	24	0	22	0
21 Diabetes Mellitus . . . . .	5	0	1	2	1,372	83	37	15	120	211	0	31	0	11
22 Pneumonia & Influenza . . . . .	18	5	1	2	11	122	1,900	149	17	239	115	0	31	0
23 Chronic obstructive pulmonary disease & allied cond.	14	1	0	3	1	83	355	1,930	14	52	62	0	61	0
24 Chronic liver disease and cirrhosis . . . . .	0	0	0	1	53	44	20	755	37	79	0	17	0	1
25 Septicemia . . . . .	7	1	0	0	0	34	44	20	10	526	80	0	20	0
26 Nephritis, nephrotic syndrome & nephrosis . . . . .	0	0	1	2	33	57	28	9	44	534	1	23	0	9
27 Motor vehicle injuries—unintentional injuries . . . . .	0	0	0	1	5	3	5	6	13	6,1,580	5	0	96	5
28 All other unintentional injuries & adverse effects . . . . .	6	0	1	1	6	44	47	43	18	64	24	0	1,597	0
29 Suicide . . . . .	2	1	0	0	0	6	3	9	1	1	2	0	2	871
30 Homicide . . . . .	0	0	0	1	0	2	1	1	4	2	0	1	0	704
TOTAL DEATHS** . . . . .	1,199	294	287	538	609	4,992	5,236	5,192	1,127	3,088	3,105	1,604	3,536	878
													707	1,601
														4,943

\*Numbers shown here are the final underlying frequencies. They are sometimes larger than numbers shown on the diagonal due to the fact that a sequence of conditions may imply an underlying cause that is not specifically mentioned on the death certificate.

\*\*Differences between these totals and the summation over causes are attributable to causes not given in the table.

Note: In this table, a death is counted only once in a condition category although several conditions within the category may have been reported or a single condition may have been recorded more than once on the death certificate.

TABLE 23

NUMBER OF DEATHS WITH SELECTED PAIRS OF CONDITIONS MENTIONED  
TOGETHER, NORTH CAROLINA RESIDENTS, 1989

		Conditions Mentioned on Death Certificate										Conditions Mentioned on Death Certificate (Numbers Refer to Row Titles)									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15					
1	Diseases of heart . . . . .	21,672	3,164	7,349	3,011	57	75	335	28	113	37	731	21	254	43	78					
2	Cerebrovascular disease	3,164	8,340	2,767	609	11	21	71	4	20	10	106	8	63	8	5					
3	Atherosclerosis . . . . .	7,349	2,767	11,530	894	24	32	114	9	28	14	206	4	76	12	12					
4	Cancer . . . . .	3,011	609	894	14,506	285	341	1,575	182	656	154	4,169	181	1,298	158	341					
5	Lip . . . . .	57	11	24	285	285	0	2	0	0	4	8	0	2	0	1					
6	Stomach . . . . .	75	21	32	341	0	341	0	1	0	0	0	1	0	1	0					
7	Colon, rectum, rectosigmoid junction & anus . . . . .	335	71	114	1,575	2	0	1,575	1	6	2	15	0	16	2	7					
8	Liver . . . . .	28	4	9	182	0	1	1	182	0	0	0	0	1	0	0					
9	Pancreas . . . . .	113	20	28	656	0	0	6	0	656	0	2	0	0	0	0					
10	Larynx . . . . .	37	10	14	154	4	0	2	0	0	154	13	0	1	0	0					
11	Trachea, bronchus and lung . . . . .	731	106	206	4,169	8	1	15	0	2	13	4,169	4	10	2	1					
12	Malignant melanoma . . . . .	21	8	4	181	0	0	0	1	0	0	4	181	2	0	0					
13	Female breast . . . . .	254	63	76	1,298	2	1	16	0	0	1	10	2	1,298	3	5					
14	Cervix uteri . . . . .	43	8	12	158	0	0	2	0	0	0	2	0	0	3	158	0				
15	Ovary & other uterine adnexa . . . . .	78	5	12	341	1	0	7	0	1	0	1	0	1	0	5	0				341
16	Prostate . . . . .	371	102	135	1,199	2	4	17	1	7	2	22	0	0	0	0					
17	Bladder . . . . .	74	23	35	294	1	0	6	0	0	0	8	0	0	0	0					
18	Brain tumors . . . . .	54	12	13	287	0	0	1	0	0	0	5	0	0	0	0					
19	Non-Hodgkins lymphoma . . . . .	123	8	20	538	0	0	6	0	0	0	7	0	2	0	1					
20	Leukemia . . . . .	143	57	39	609	1	0	8	0	4	1	13	0	5	0	2					
21	Diabetes Mellitus . . . . .	2,566	1,116	1,649	580	4	13	77	9	37	5	114	4	62	9	15					
22	Pneumonia & Influenza . . . . .	1,851	1,002	874	956	17	16	77	6	21	5	333	8	53	6	15					
23	Chronic obstructive pulmonary disease & allied cond. . . . .	2,464	464	1,156	1,079	22	10	61	7	24	21	648	4	33	7	6					
24	Chronic liver disease and cirrhosis . . . . .	254	40	71	81	3	0	5	29	3	4	19	1	4	1	0					
25	Sepsisemia . . . . .	949	447	339	568	7	6	56	7	18	6	85	4	34	8	15					
26	Nephritis, nephrotic syndrome & nephrosis . . . . .	1,510	324	637	542	5	3	56	12	20	1	64	4	19	15	14					
27	Motor vehicle injuries—unintentional injuries . . . . .	85	8	13	4	0	1	0	0	0	0	0	1	0	0	0					
28	All other unintentional injuries & adverse effects . . . . .	1,024	431	469	385	16	5	43	2	9	13	90	0	0	0	0					
29	Suicide . . . . .	23	3	2	16	0	0	2	0	1	1	2	0	1	0	0					
30	Homicide . . . . .	24	2	5	2	0	0	0	0	0	0	0	0	0	0	0					
31	Alcohol-related conditions . . . . .	312	74	92	63	6	1	4	1	4	1	24	1	0	2	0					
32	Hypertension with or without renal disease . . . . .	2,907	1,562	1,380	507	9	10	61	5	19	8	107	9	56	11	10					
	TOTAL DEATHS** . . . . .	21,672	8,340	11,530	14,506	285	341	1,575	182	656	154	4,169	181	1,298	158	341					

TABLE 23 — Continued

**NUMBER OF DEATHS WITH SELECTED PAIRS OF CONDITIONS MENTIONED  
TOGETHER, NORTH CAROLINA RESIDENTS, 1989**

Conditions Mentioned on Death Certificate	Conditions Mentioned on Death Certificate (Numbers Refer to Row Titles)												
	16	17	18	19	20	21	22	23	24	25	26	27	
1 Diseases of heart . . . . .	371	74	54	123	143	2,566	1,851	2,464	254	949	1,510	85	1,024
2 Cerebrovascular disease . . . . .	102	23	12	8	57	1,116	1,002	464	40	447	324	8	431
3 Atherosclerosis . . . . .	135	35	13	20	39	1,649	874	1,156	71	339	637	13	469
4 Cancer . . . . .	1,199	294	287	538	609	580	956	1,079	81	568	542	4	385
5 Lip . . . . .	2	1	0	0	1	4	17	22	3	7	5	0	16
6 Stomach . . . . .	4	0	0	0	0	13	16	10	0	6	3	0	5
7 Colon, rectum, rectosigmoid junction & anus . . . . .	17	6	1	6	8	77	77	61	5	56	1	43	2
8 Liver . . . . .	1	0	0	0	0	9	6	7	29	7	12	0	2
9 Pancreas . . . . .	7	0	0	0	4	37	21	24	3	18	20	0	9
10 Larynx . . . . .	2	0	0	1	5	5	21	4	6	1	13	1	0
11 Trachea, bronchus and lung . . . . .	22	8	5	7	13	114	333	648	19	85	64	0	90
12 Malignant melanoma . . . . .	0	0	0	0	0	4	8	4	1	4	4	0	5
13 Female breast . . . . .	0	0	0	2	5	62	53	33	4	34	19	1	23
14 Cervix uteri . . . . .	0	0	0	0	0	9	6	7	1	8	15	0	4
15 Ovary & other uterine adnexa . . . . .	0	1	1	2	15	6	0	15	14	14	5	0	0
16 Prostate . . . . .	1,199	10	0	6	7	66	107	92	3	42	98	0	32
17 Bladder . . . . .	10	294	2	0	1	14	17	18	0	11	38	0	13
18 Brain tumors . . . . .	0	2	287	0	0	11	22	6	0	10	2	0	12
19 Non-Hodgkins lymphoma . . . . .	6	0	0	538	14	19	50	12	3	58	33	0	18
20 Leukemia . . . . .	7	1	0	14	609	27	73	24	2	88	30	1	31
21 Diabetes Mellitus . . . . .	66	14	11	19	27	4,992	412	318	92	357	480	9	199
22 Pneumonia & Influenza . . . . .	107	17	22	50	73	412	5,236	790	87	551	370	4	226
23 Chronic obstructive pulmonary disease & allied cond. . . . .	92	18	6	12	24	318	790	5,192	58	180	238	6	232
24 Chronic liver disease and cirrhosis . . . . .	3	0	0	3	2	92	87	58	1,127	77	112	6	48
25 Septicemia . . . . .	42	11	10	58	88	357	551	180	77	3,088	385	13	250
26 Nephritis, nephrotic syndrome & nephrosis . . . . .	98	38	2	33	30	480	370	238	112	3,385	3,105	7	154
27 Motor vehicle injuries—unintentional injuries . . . . .	0	0	0	1	9	4	6	6	6	13	7	1,604	5
28 All other unintentional injuries & adverse effects . . . . .	32	13	12	18	31	199	226	232	48	250	154	5	3,536
29 Suicide . . . . .	2	1	0	1	0	6	4	10	1	1	2	0	2
30 Homicide . . . . .	0	0	0	1	0	2	1	2	4	2	4	0	878
31 Alcohol-related conditions . . . . .	4	0	0	1	0	64	122	108	505	76	81	97	285
32 Hypertension with or without renal disease . . . . .	72	19	13	8	14	1,212	264	422	40	149	95	6	165
<b>TOTAL DEATHS*</b> . . . . .	<b>1,199</b>	<b>294</b>	<b>287</b>	<b>538</b>	<b>609</b>	<b>4,992</b>	<b>5,236</b>	<b>5,192</b>	<b>1,127</b>	<b>3,088</b>	<b>3,105</b>	<b>1,604</b>	<b>3,536</b>
													<b>878</b>
													<b>707</b>
													<b>1,601</b>
													<b>85</b>
													<b>4,943</b>

\*Differences between these totals and the summation over causes are attributable to causes not given in the table and to multiple counting of a condition if it appears in combination with more than one other condition on a certificate.

Note: In this table, a death is counted only once in a condition category although several conditions within the category may have been reported or a single condition may have been recorded more than once on the death certificate. Also, the ICD-9 codes used to count hypertension and atherosclerosis mention are different from the codes used to count underlying cause elsewhere in this report. For further explanation, see *Multiple Conditions Present at Death: A Special Study*, SCHS, 1982.

### SEPTICEMIA - MENTIONED

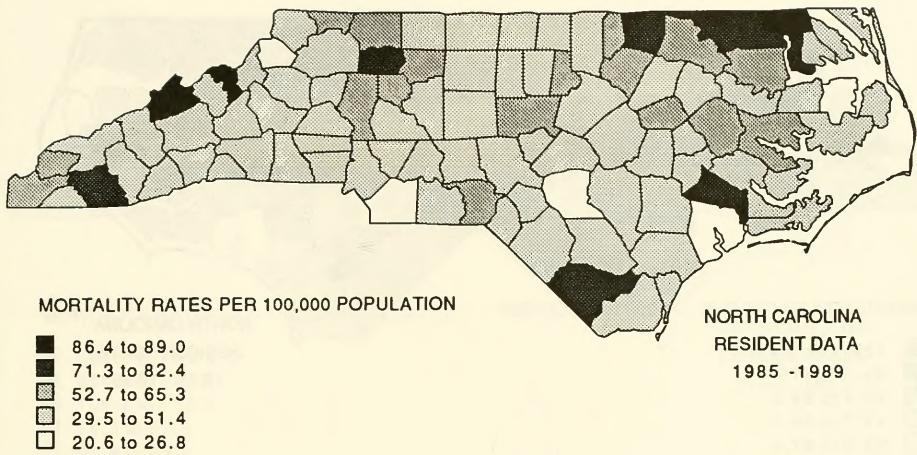


FIGURE 18.A

### SEPTICEMIA - MENTIONED

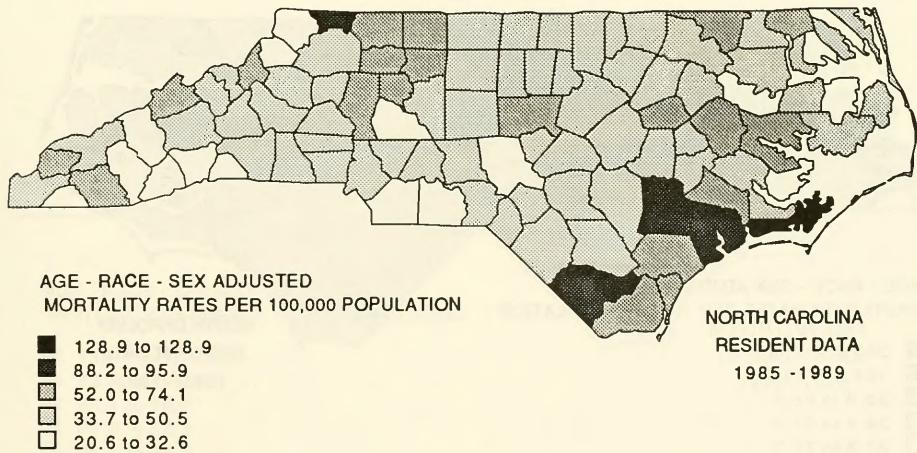


FIGURE 18.B

### DIABETES MELLITUS - MENTIONED

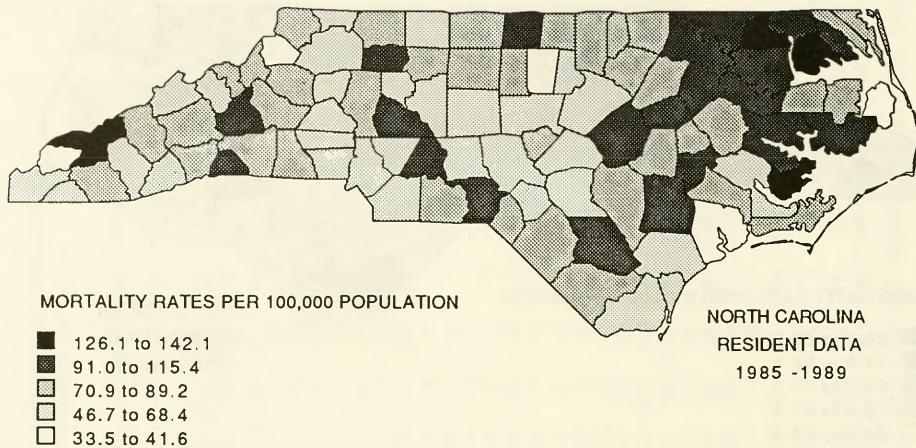


FIGURE 19.A

### DIABETES MELLITUS - MENTIONED

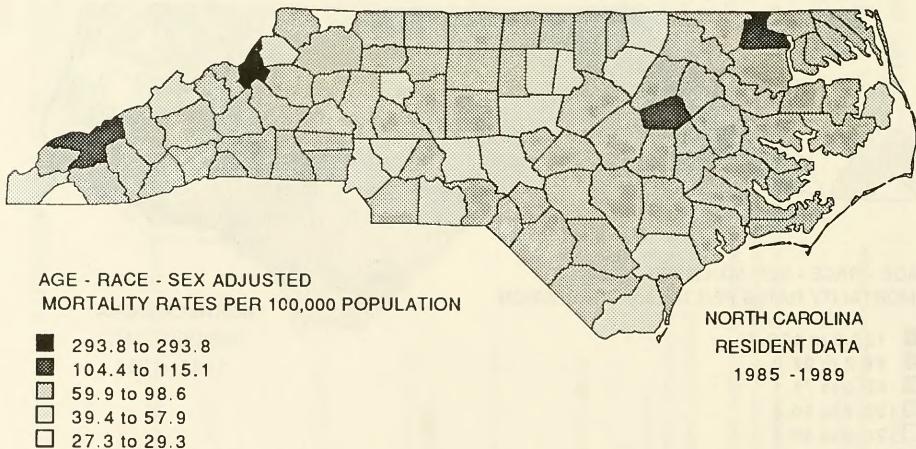


FIGURE 19.B

## HYPERTENSION- MENTIONED

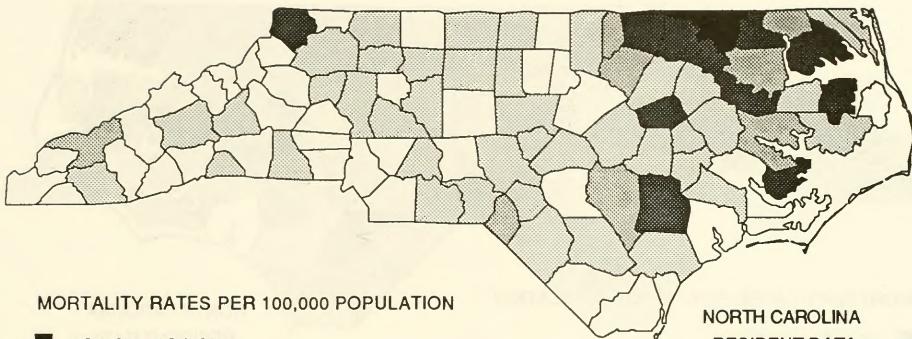


FIGURE 20.A

## HYPERTENSION- MENTIONED

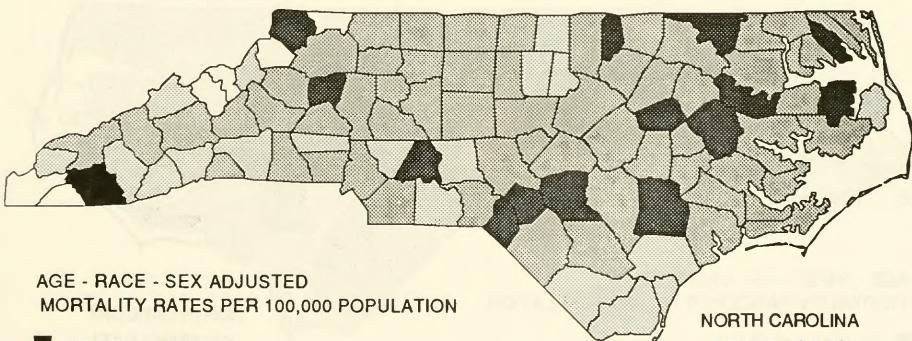


FIGURE 20.B

## ATHEROSCLEROSIS - MENTIONED

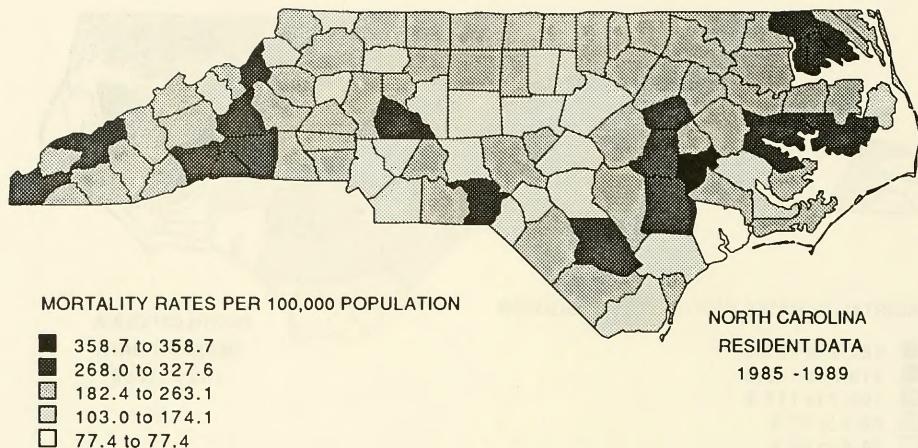


FIGURE 21.A

## ATHEROSCLEROSIS - MENTIONED

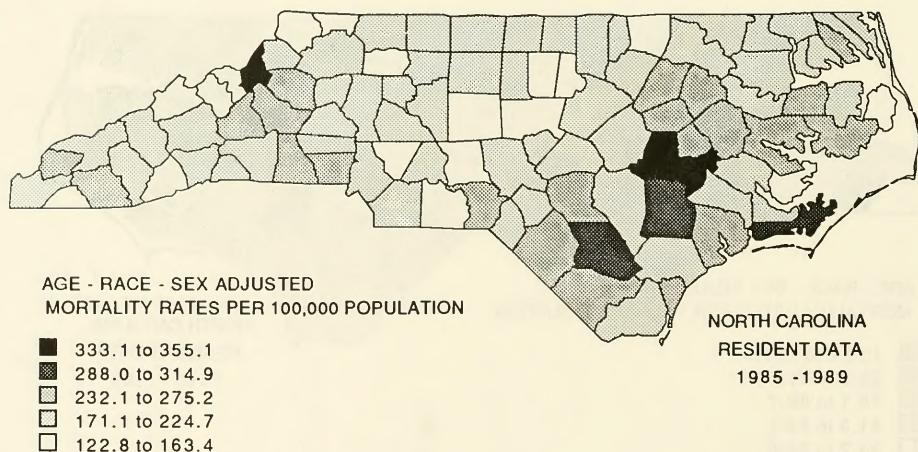


FIGURE 21.B

## NEPHRITIS, NEPHROTIC SYNDROME\* - MENTIONED

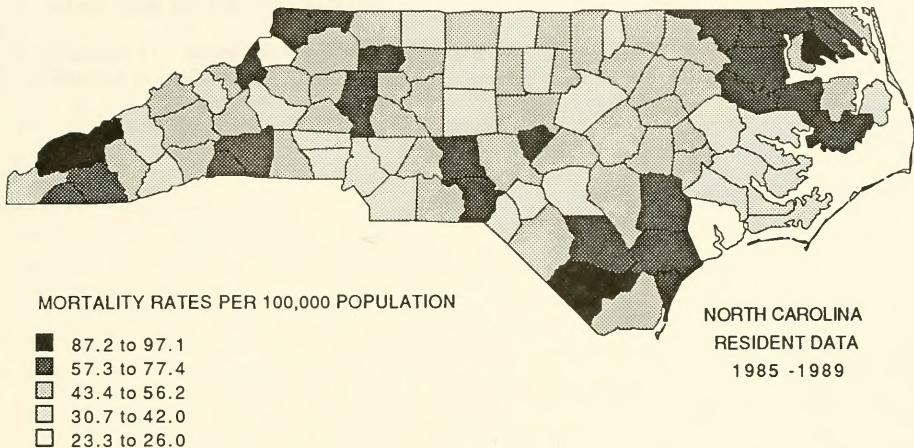


FIGURE 22.A

\* Nephritis, nephrotic syndrome and nephrosis

## NEPHRITIS, NEPHROTIC SYNDROME\* - MENTIONED

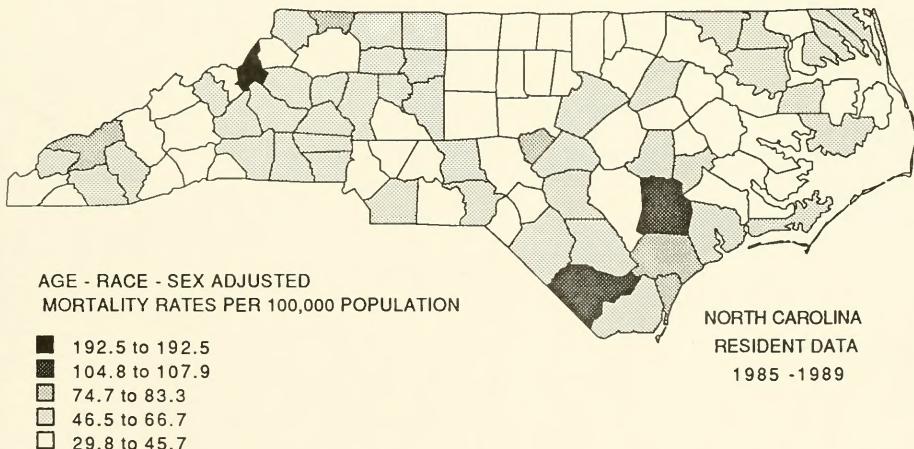


FIGURE 22.B

\* Nephritis, nephrotic syndrome and nephrosis



## VII. REFERENCES

1. SAS Institute Inc. *SAS User's Guide: Statistics, 1982 Edition*, Cluster Procedure. Cary, N.C., 1982.
2. Kleinman, J.C. "Infant Mortality," *Statistical Notes for Health Planners*. Number 2, National Center for Health Statistics, Rockville, Maryland, July 1976.





Department of Environment, Health, and Natural Resources  
Division of Statistics and Information Services  
P.O. Box 27687  
Raleigh, N.C. 27611-7687  
919/733-4728

UNIVERSITY OF N.C. AT CHAPEL HILL



00018468953

This book may be kept out one month, unless a renewal notice is sent to you. It must be brought to the North Carolina Collection (in Wilson Library) for renewal.

